

Managing Safety at Sea

- The findings and conclusions of an international survey into the Implementation of the ISM Code

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1 Introduction

Is the ISM Code working? Fortunately, or unfortunately, the author has worked in the close proximity of lawyers during the last twenty years and therefore feels confident in answering the question in the way only a lawyer could: - ‘... on the one hand it is, but on the other hand it isn’t!’

Hopefully, this book will provide a more illuminating insight into the real answer to that question. At one level the answer really is both yes and no – at a deeper level there is a complicated and often complex and conflicting picture - which perhaps should not surprise us when we consider we are dealing with a multi-national, multi-faceted industry with a globalised labour force.

According to IMO: It has been estimated that some 12,000 ships had to comply by the first deadline with the second phase of implementation bringing in another 13,000 ships (IMO Briefing 28/6/2002) – accordingly we should not be too surprised to find a diversity of opinion and experiences.

For one Georgian Master it is quite clearly one of the most significant moves forward that has ever happened to our industry:

“I think that the implementation of the ISM Code is the most important step in the new millennium for the improvement of safety at sea”

Whereas, for one British Chief Engineer, his perception seems quite different:

“ISM is the biggest pile of paper eating Industrial White Wash that has ever been produced, ships are still being lost or cause incidents, but most will be ISM compliant and the paperwork will be up to date.”

Others are perhaps more philosophical in their reflections such as the Master on board a Netherlands Antilles vessel who suggests:

“Personally I am more interested in the weather forecast!”

Or, the Maritime University Lecturer who suggested:

“ISM is a good system badly implemented.”

Can that be reconciled with the claim of one leading, national flag tanker owner who claimed, in unambiguous terms, that:

“We are now saving \$1,000,000 per ship per year which we directly attribute to our ISM implementation.”

A very important issue to get clear in our minds, even at this early stage, is that the ISM Code is identical, word-for-word, for every ship and every ship operating company everywhere in the world. The reasons why there might be such varied responses and experiences will be the real subject of this study.

The only thing that can be said with any degree of certainty about ISM implementation is that there is a very wide-ranging scale of perceptions, level of

support, experiences and expectations for this whole ISM phenomenon– as the above examples start to illustrate. Much was written in advance of phase one implementation on 1st July 1998 about whether the ISM Code was needed and whether it could or would be implemented. Post phase one implementation much has been written about whether the Code has been implemented. Invariably the authors of those articles and reports tended to be negative in their approach – often condemning the ISM Code as a failure or at best a good idea that had been ‘still-born’. Rarely were the authors of those reports the people at the sharp-end of implementation, the seafarers or ship operators, and it seemed that their opinions were based on individual bad experiences and not much more – subjective opinions with little or no empirical evidence to confirm that their views were widely held.

Some endeavoured to support their view that the ISM Code was not working by drawing attention to the apparent fact that accidents were still happening at an alarming rate and claims remained at a high level, port State detentions appeared to be increasing and ships which were in possession of all the relevant ‘paperwork’ were breaking up, sinking, spilling their oil into the ocean and killing their seafarers. On the other hand there were those who attempted to argue that the Code was working and in their support they groped around desperately looking for something to cling onto – often relying upon a claim by a single P&I Club that they had experienced a reduction in their claims post ISM implementation – which they attributed to the successful implementation of Safety Management Systems by their Members. Indeed the Secretary-General of IMO himself has made repeated references to the particular report and even published a special briefing on 25.9.2001 entitled ‘IMO welcomes ISM Code study’. Those prophets of doom, in the first case, seemed not to appreciate that for every one ‘Erica’ there were many thousands of tankers conducting their trade without incident. That the port State control authorities had implemented a ‘Concentrated Inspection Campaign’ and were progressively and aggressively increasing the frequency and intensity of their inspections and that to expect radical changes ‘overnight’ would be unrealistic and impractical. For those optimists – who were almost ‘clutching at straws’ trying to find something to prove that there was light at the end of the tunnel – they failed to recognise that the particular P&I Club which had made the claim was one of the smallest of the Clubs representing less than 2% of the world shipping – and thus a minute sample. They also failed to realise that none of the other twelve Clubs of the International Group of P&I Clubs, which insure more than 90% of the world deep sea fleet, were making any similar claim – nor did any other insurer. Indeed there was a noticeable silence, which should have been apparent to those who had kept an open mind on the subject. Since a lot of good publicity could have been obtained by anyone who could make such a claim then the silence surely tells its own story – but the truth behind this is not necessarily as it might appear. The question should have asked – “...should we realistically have expected to see any significant reduction in accidents and claims, on a global scale, with immediate effect – post 1st July, 1998?” Realistically the answer would have to be “No”.

That does not mean however that the ISM Code was doomed from the start – only that it would take some time for its benefits to fully manifest themselves across the entire international shipping industry.

However, it was becoming apparent that many ship operating companies, ships and individuals were experiencing significant problems both with the initial implementation and with maintaining their implemented Safety Management Systems (SMS).

The author therefore decided to embark upon a project to collect information and evidence of ISM implementation from the seafarers, operators and other participants

in the shipping and related industries and professions. The intention was to try to produce a picture of ISM implementation 2½ years on from the first phase implementation and in the lead up to the second phase implementation. The project involved a detailed and extensive survey with more than 70,000 questionnaires being distributed worldwide as well as a dedicated Internet website being established at <http://www.ismcode.net>¹ The website included details of the research and relevant information about the ISM Code and also allowed the questionnaires to be completed on-line. Three versions of the questionnaires were produced:



The Nautical Institute
Capt Phil Anderson, Master Mariner (PSC, SA, HSE)
New President - The Nautical Institute
101, Cannon Street, London EC4A 3DF
Tel: +44 (0)20 7494 4000
Fax: +44 (0)20 7494 4001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>
Postal: The Nautical Institute, PO Box 100, The Hague, 2500 AA, The Netherlands
Phone: +31 (0)70 400 0000
Fax: +31 (0)70 400 0001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>

**Survey into the implementation of the ISM Code
Questionnaire for Masters and Seafarers ***

The primary purpose behind the implementation of the ISM Code was to make ships safer and the sea cleaner. We are now nearly three years past implementation for passenger ships, bulk carriers and tankers and have three years to go before full implementation for other cargo ships. It is crucial that we establish whether the first phase of ISM implementation is working and if it is not then we can establish why not in order that positive steps can be taken to improve these problems.

Whether you are a Master, senior officer or crew, I HSE, and we would appreciate this research in order that we can establish a true picture of the global situation with regard to ISM implementation.

PLEASE take a few minutes to complete this questionnaire.

The information you provide will be used only for statistical purposes and I personally guarantee to you that confidentiality will be maintained.

If you would like to see a draft of the conclusions to this research please complete the details below:

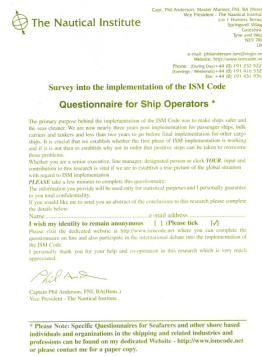
Name: _____ e-mail address: _____
I wish my identity to remain anonymous: ☐ (Please Tick if)

Please visit the dedicated website at <http://www.ismcode.net> where you can complete the questionnaire on-line and also participate in the international debate over the implementation of the ISM Code.

I personally thank you for your help and co-operation in this research which is very much appreciated.

Captain Phil Anderson, PSC, SA, HSE
New President - The Nautical Institute

* Please Note: Specific Questionnaires for Ship Operators and other shore based individuals and organisations in the shipping and related industries and professions can be found on my dedicated Website - <http://www.ismcode.net> or please contact me for a paper copy.



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Capt Phil Anderson, Master Mariner (PSC, SA, HSE)
New President - The Nautical Institute
101, Cannon Street, London EC4A 3DF
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Fax: +44 (0)20 7494 4001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>
Postal: The Nautical Institute, PO Box 100, The Hague, 2500 AA, The Netherlands
Phone: +31 (0)70 400 0000
Fax: +31 (0)70 400 0001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>

**Survey into the implementation of the ISM Code
Questionnaire for Ship Operators ***

The primary purpose behind the implementation of the ISM Code was to make ships safer and the sea cleaner. We are now nearly three years past implementation for passenger ships, bulk carriers and tankers and have three years to go before full implementation for other cargo ships. It is crucial that we establish whether the first phase of ISM implementation is working and if it is not then we can establish why not in order that positive steps can be taken to improve these problems.

Whether you are an owner, charter, charterer or other service provider, I HSE, and we would appreciate this research in order that we can establish a true picture of the global situation with regard to ISM implementation.

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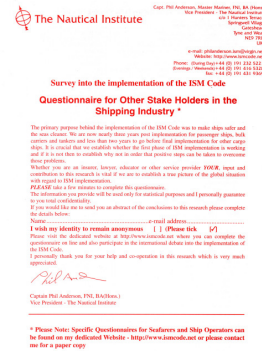
Name: _____ e-mail address: _____
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101, Cannon Street, London EC4A 3DF
Tel: +44 (0)20 7494 4000
Fax: +44 (0)20 7494 4001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>
Postal: The Nautical Institute, PO Box 100, The Hague, 2500 AA, The Netherlands
Phone: +31 (0)70 400 0000
Fax: +31 (0)70 400 0001
Email: phil@nauticalinstitute.org
Website: <http://www.nauticalinstitute.org>

**Survey into the implementation of the ISM Code
Questionnaire for Other Stake Holders in the Shipping Industry ***

The primary purpose behind the implementation of the ISM Code was to make ships safer and the sea cleaner. We are now nearly three years past implementation for passenger ships, bulk carriers and tankers and have three years to go before full implementation for other cargo ships. It is crucial that we establish whether the first phase of ISM implementation is working and if it is not then we can establish why not in order that positive steps can be taken to improve these problems.

Whether you are an owner, charter, charterer or other service provider, I HSE, and we would appreciate this research in order that we can establish a true picture of the global situation with regard to ISM implementation.

PLEASE take a few minutes to complete this questionnaire.

The information you provide will be used only for statistical purposes and I personally guarantee to you that confidentiality will be maintained.

If you would like to see a draft of the conclusions to this research please complete the details below:

Name: _____ e-mail address: _____
I wish my identity to remain anonymous: ☐ (Please Tick if)

Please visit the dedicated website at <http://www.ismcode.net> where you can complete the questionnaire on-line and also participate in the international debate over the implementation of the ISM Code.

I personally thank you for your help and co-operation in this research which is very much appreciated.

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The first questionnaires were despatched in April 2001 and by the end of November 2001 nearly 3000 completed forms had been returned and the data entered in a Access data-base. In addition to the answers to the specific questions raised in the questionnaire the respondents were also encouraged to provide narrative comment to share their experience of ISM implementation. Nearly 800 detailed and interesting comments were received and catalogued. All respondents were offered total anonymity – many chose to exercise that option but many more were quite willing to openly put their names to their comments. The author is extremely grateful to all respondents and his only regret is that time and resources did not allow him to respond and thank each contributor personally or to enter into a dialogue – particularly when some very genuine and kind offers of help were made. For that he extends his sincere apologies but hopes that the results and conclusions in this book will accurately reflect the views and opinions put forward. The author's views will be expressed extensively throughout this book but much more importantly those Masters, seafarers, ship operators and other stakeholders will be given their opportunity, wherever possible, to have their say – in their own words. No apology is made for the numerous quotes which will be included in the text and which will provide much of the substance of this study. If we are to understand how implementation is progressing we need to listen to those who are involved directly in that process – we need to hear of the problems experienced as well as the successes achieved. Where mistakes have been and are being made we need to learn from those mistakes and where successes have been achieved let us understand how those successes were achieved and be prepared to emulate those pioneers. It is not suggested that we simply try to copy what others have done – rather we should try to understand the principles and method adopted and then try to apply them. It will be noticed from the pictures of the questionnaires above that a 'colour coding' was introduced when the questionnaire forms were printed:

Masters and Seafarers – in blue

Ship Operators – in green

Other Stake Holders – in red

That colour coding has been carried forward into this book to allow the reader more easily to identify and distinguish between the respective views and results of the Masters and Seafarers, Ship Operators and Other Stakeholders respectively.

Anonymity has been maintained for all contributors – even where the individual may have indicated that they were prepared to be identified - except where press reports or conference presentations and similar are being quoted. It was considered sufficient for the purpose of appreciating what the individual had to say merely to define their position in the industry and possibly to identify type of ship or organisation in which they were based and, occasionally, by their nationality.

More detailed explanations of the questions in the questionnaire forms and the answers which were provided are addressed in the various sections of this book.

In addition to individuals who returned completed questionnaires or otherwise submitted their personal reflections and observations – there were a number of other activities which provided group participation and for which the author is most grateful. For example Nautical Institute branches around the world held debates involving local branch members to share their experiences and returned minutes or other records of those debates. Nautical Colleges in many countries have encouraged their marine students to participate. National Ship Owners organisations have solicited the views of their members and have encouraged them to participate in the survey. BIMCO (The Baltic International Maritime Council) provided an opportunity for the author to participate in their annual ISM Residential Course in Copenhagen where the views and comments of the delegates and other speakers were obtained. BIMCO also encouraged their own members to participate and provided a link from the front page of their website to the dedicated ISM site. The author was invited to speak at numerous seminars and conferences which provided further opportunities to meet with and discuss relevant issues with a very wide cross section of people within the industry with important and valuable contributions to make.

Many shipping newspapers and other maritime publications were also extremely helpful in carrying feature articles covering the research and encouraging their readers to participate. All these contacts provided extremely valuable opportunities for the author to widen his own knowledge, understanding and appreciation of the real issues involved in the apparently innocent question: Is ISM implementation working?

Inevitably there must always be some reservations held with regard to the true representation of the data and observations received from questionnaires and a survey of the type undertaken – since it could possibly be argued that it is a particular ‘type of person’ who completes questionnaires and their views may not coincide with the ‘rank and file’ members of the intended participants and thus may not be a true representation at all. When the various sections of the book are explored it will become apparent that a very wide cross section of views are expressed – from those who are vehemently against ISM to those who are 100% supporters – with many shades of grey in between. There are seafarers of all ranks and many nationalities. It is the view of the author that the results as set out in the following sections of this book do provide an accurate reflection of the varied views of a significant number of those at sea and those ashore on the question of ISM implementation during the year 2001.

Whilst it may appear unfair to inflict a conclusion on the reader at the beginning of a work such as this – it is believed that on this occasion it is important if objectivity is to be maintained and a serious bout of depression is to be avoided. A very important point to take hold of, at this stage and to carry forward as we proceed into the

substance of the book itself is that the ISM Code **can** work and is working very satisfactorily in a number of companies. This will hopefully be demonstrated in due course. There will, though, be many negative issues coming to light in the sections ahead – it is important that we confront those issues but, at the same time, keep in mind the knowledge of the possibility that a properly implemented SMS can work and is working on board ships today.

As we now start to consider, in more depth, some of the findings from the survey it is important that we introduce some consistency into our understanding and use of particular terms. A number of the expressions we will be using do have quite specific meanings and are defined within the relevant regulations. It is therefore appropriate, perhaps, to set out those definitions as contained in SOLAS Chapter IX, resolution 741(18) / MSC.104(73) and resolution 788(19) / A.913(22):

- **Accident** means incidents involving injury or damage to life, the environment, the ship or its cargo.
- **Hazardous occurrences** are situations which could have led to an accident if they had developed further (i.e. near miss situations).
- **Non-conformity** means an observed situation where objective evidence indicates the non-fulfilment of a specified requirement.

Five further definitions, taken from the ICS / ISF Guidelines on the application of the ISM Code, will also be useful:

- **Internal SMS Audit** is a systematic and independent verification process carried out by the Company as part of its management function to determine whether the SMS activities and related results are in compliance with the SMS.
- **Objective evidence** means quantitative or qualitative information, records or statements of fact pertaining to safety or to the existence and implementation of a SMS element, which is based on observation, measurement or test and which can be verified.
- **Observation** means a statement of fact made during a safety management audit and sustained by objective evidence.
- **Safety management audit** means a systematic and independent examination to determine whether the SMS activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.
- **Verify** means to investigate and confirm that an activity or operation is in accordance with a specified requirement. (Examples of verification activities includes inspections, tests and operational checks on ships and their equipment prior to departing port, at sea or before entering port or closing with the land. A system audit is also an example of a verification activity.)

1.1 Aims of the survey

As was suggested in the Introduction, little if any empirical evidence seemed to exist that confirmed, or otherwise, whether the ISM was working, was starting to work or was having any tangible effects. Prior to commencing the research project the author had started to glean an impression, from talking to serving Masters and officers as well as shore based ship operators – that there were some who were speaking in quite favourable terms about their experiences of ISM implementation and some who seemed to have had bad experiences and were very strongly opposed to the whole idea.

It is perhaps worth reflecting upon a few of the varied views in order to consider what we are really up against. A typical and encouraging comment was submitted by a ferry master:

“The crew are definitely more safety aware and basic training greatly enhanced.”

Some seafarers had recognised that not only was it proving useful in itself but they had found that they could use the ISM Code to their advantage – as one Master put it:

“ISM has made things better. If you use the system properly it puts the pressure back on the office as they have to be seen to be putting things to rights.”

Others would then start to paint a quite different picture – some seafarers seemed to have had quite contrary experiences – as one Master reported:

“The only thing that ISM has changed is the volume of paperwork. Now instead of doing planned maintenance we only have time to write about what we should be doing. Instead of training we now have checklists. The ‘blame’ mentality is still there now there are thousands of pieces of paper to make sure the finger gets pointed to some poor soul and not the accountant who starved them of the funds to do things properly.”

One Second Engineer did not require many words to sum up his experience of ISM when he stated quite simply that his view of the Code was:

“Waste of paper and time!”

For others there were various degrees of resentment; they felt that they had had the ISM Code inflicted upon them. Indeed there were many Masters and officers, with whom the author discussed ISM, who stated most forcefully that they had had good safety systems in place for many years and did not need this formalised system, and certainly resented the additional paperwork that seemed to accompany ISM as unwelcome baggage.

What was becoming apparent from these discussions was that different people were reporting very different experiences. Sometimes a likely explanation was forthcoming when it transpired that they were working for very different types of ship operating companies. However, there were also examples of individuals working within the same company who had very different views, perceptions and experiences of whether the ISM Code was working or not. It was perceived therefore that if an understanding

of the current status of implementation was to be established then the views of a very wide range of individuals would have to be obtained.

1.1.1 To establish the current status of implementation

It had been recognised at an early stage that even though the survey questionnaires could be completed 'on-line' – the fact was that many seafarers on board ship would not have access to the Internet. It was therefore decided to print paper copies of the questionnaire for distribution to seafarers.

Initially it was considered that a survey of Members of the Nautical Institute would provide a good 'sample' - with 38 branches around the world and over 7000 members in 70 countries - that must provide a good overall picture. However, it was then recognised that restricting the survey to Members of the Nautical Institute could produce quite a distorted picture. First, by definition, the sample would be almost exclusively Masters and deck officers. Secondly, such a survey would exclude a very wide range of seafarers who, for various reasons, had not joined the professional body or otherwise did not have access to the Institute journal 'Seaways'. Whilst the Nautical Institute membership was most definitely to be included - it was decided to expand the scope of the survey to include as wide a range of seafarers as possible.

The Institute of Marine Engineers (now ImarEst – Institute of Marine Engineering, Science and Technology) carried a feature article in their journal MER - directing their Members towards the dedicated website where they could participate and complete the questionnaire 'on-line'. The Merchant Navy Trade Union – NUMAST not only carried a major article in their *Telegraph* - but also agreed to enclose a copy of the questionnaire – a circulation of about 25,000! Similarly the International Federation of Shipmasters' Associations also distributed questionnaires with its own 'Newsletter'.

However, whilst the individuals likely to be contacted through these sources would now include Engineers and other officers, the survey was still limiting the potential individuals being contacted and consulted to those reading the newspapers and journals of the professional bodies based in the U.K. Other sources of distribution of the questionnaires had to be found to include those seafarers who might not have the opportunity of reading such publications.

Whether or not as a result of 'divine' intervention or inspiration will have to remain a point for speculation but the author approached the Mission to Seafarers to see if they could help and received a most positive response. Two allies and supporters were found within the headquarters of the Mission in London – the Reverend Canon Ken Peters and the editor of the Mission newspaper – 'The Sea' – Gillian Ennis. In addition to a major feature article which appeared in *The Sea* and the inclusion of a further 25,000 copies of the questionnaire – Canon Peters wrote to all the Chaplains in the Missions around the world asking them to take copies of the questionnaire with them when they visited ships in their ports. The chaplains were asked to encourage as many ranks and nationalities of seafarers as possible to participate and complete the forms – assisting them with the task if necessary. Many of the Mission stations are, in this 21st century, linked up to the Internet and therefore the Chaplains were also asked to encourage seafarers to utilise that facility to visit the dedicated website and complete the forms on line.

Batches of questionnaires were also sent to over 300 Nautical Training Establishments around the world with a request that the head of faculty distribute the questionnaires to mariners who may be ashore studying for their professional qualifications.

Most of the shipping newspapers and magazines carried feature articles about the research project and included a request for their readers to visit the dedicated website and complete the appropriate questionnaire ‘on-line’ – Lloyds List even created a direct link from it’s own site to the ISM research site. Completing the questionnaires on line would have proved a considerable help to the author since the data would then have been dropped automatically into the relational Access Data-base which had been set up and which would be used to analyse the data in due course. (The data from the paper questionnaires would require manual input.) However, it became apparent that relatively few questionnaires were being completed on-line compared with the dozens of completed paper questionnaires that quickly started to arrive from Masters and seafarers. It was therefore decided to print and distribute paper copies of the versions of the questionnaire for the Ship Operators and the Other Stakeholders.

Whilst some Ship Operator versions of the questionnaire were sent directly to specific shipping companies, batches were sent to the National Ship Owners Associations with a request that they distribute them; making their own request of their members to complete and return the forms and participate in the survey. Some organisations were extremely helpful and supportive. Shipowners organisations were also approached and again some were very responsive and helpful – BIMCO gave considerable coverage of the project in their own publications and created a web-link from the front page of their website to the dedicated ISM site.

Clearly, the two ‘key players’ in ISM implementation were going to be the Ship Operators on the one hand and the Seafarers on the other. However, there are many other individuals and organisations directly or indirectly involved in ISM implementation who could provide valuable objective assessment of the current status of implementation – as viewed from their particular perspective. A non-exhaustive list of the types of individuals and organisations anticipated to fall into this category is set out below:

Agents Charterers Classification Societies – acting in there capacity as a Classification Society Classification Societies – acting on behalf of a Flag State Administration Flag State Administrations	H&M Underwriters Insurance brokers ISM Consultants Lawyers Maritime College Lecturers P&I Insurers P&I Representatives Port State Control Inspectors	Pilots Press Professional Bodies Shipbrokers Shipowners Associations Surveyors / Consultants Trade Unions University lecturer / academic
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A pilot explained the role such an independent – third party – could play in providing an impartial objective evaluation of apparent implementation:

“Working as a Pilot (mainly tankers) I am not directly involved in the operation of the ISM Code.

Boarding ships of various owners and nationalities gives a good opportunity to observe standards on board and get the views of masters and officers.

Since the ISM Code was introduced there has been no noticeable improvement in standards. We see the same ships and the same people on them, all that has changed is that ships staff are further

*burdened by a mass of paper work.
The success of the Code seems to depend on companies operating within the 'spirit' of the Code but the companies which really needed the Code are hardly likely to enter into this spirit and just see the code as another bureaucratic obstacle to overcome or circumvent.”
U.K. Pilot*

By obtaining data and views from this potentially very wide range of individuals and organisations, seagoing and shore-based, directly and indirectly involved in the implementation process, a fairly clear picture should emerge of the current status of ISM Code implementation.

1.1.2 Identifying what is going right and what is going wrong

From informal discussions, and the various articles that had appeared concerning the status of ISM implementation, it was anticipated that some of the results were probably going to be fairly predictable. There seemed to be widespread criticism of the amount of paperwork which Masters and senior officers were now expected to complete - supposedly as part of 'ISM'. There was criticism of the irrelevance of much of the paperwork and checklists that were supposedly part of ISM. There also seemed to be a considerable reluctance to report anything – other than the most serious accidents which one couldn't avoid reporting – because of various fears and apprehensions.

Fortunately many seafarers are practical and helpful individuals who want to comply and do a good job in a professional manner – sometimes the starting point is to recognise that things might not be going quite as planned and that steps do need to be taken to rectify the situation – as one Indian Able Seaman pointed out:

“If ISM Code has to be only concerned with paperwork i.e. making reports then it has been achieved. But if it is concerned with safety then there is a lot of things to be done in this regard.”

The survey questionnaires were constructed to address these and many other issues. The three versions of the questionnaires were not identical but were integral and, on the whole, addressed the same issues. The intention was to eventually bring all the data together to compare and contrast opinions between different sectors and to construct the 'big picture' - the belief being that only by viewing the 'big picture' could a real appreciation be made of what was going right and what was going wrong. Inevitably, the structure of the questionnaires was going to receive criticism from different parties – particularly those who perhaps approached ISM implementation from one specific direction. An example of such criticism can be seen in the following observation received from a Port State Control Inspector:

“Your questionnaire is rather restricted to ‘accidents and non-conformity reporting’. In my opinion it is more useful to check, during PSC inspections, how the ship's crew is working, how the managing company is backing up the vessels; is the company really interested in upgrading maintenance and indeed actively following the ships maintenance / monitoring the ships maintenance. Some

parts of the ISM Code for the Companies / vessels are solely obligatory parts to receive the DOC / SMC, so they make only the minimal obligatory effort: many times a S.M.S. is far sub-standard.”

The issues addressed by the PSC inspector are very important and it is hoped that many of these were addressed by the respondents in the narrative section of the questionnaires if not in their answers to the questions contained within the questionnaire. Unfortunately the questionnaires already included about 30 questions on six sides of paper and, if the document increased any further in size, there was a very good chance that few people would have the time or would take the trouble to complete it. The author extends his apologies to those who would have liked other issues covered or the emphasis changed – but he hopes that many of those issues will actually come out through the numerous comments and observations from respondents which will appear in this book.

A number of respondents provided detailed comments and some of these are felt, by the author to contain such important, first hand, experiences that they will be reproduced in full or with a minimum amount of editing. One such report, which is most relevant to this section, where we are making an initial appraisal of what is going right and what is perhaps going wrong, was submitted by a British Master who explained that he had set up Safety Management Systems on board ships in five different companies – and consequently had considerable relevant experience to share:

“ There is still widespread fear among crews and officers that this is all directed against the vessels and crew. The concept that the owners / manager becomes partly liable has been lost. There is acceptance that extra paperwork is inevitable, but no faith that it will make any difference. The time lost to administration of SMS is thus not often balanced by a gain in method and control. From the level of SMS compliance I find on assuming command of vessels, many masters are at best not understanding and at worst ignoring ISM, and audit is obviously not finding it. In other companies (not here) I am often asked to go onboard vessels and ‘tidy up’ SMS just before audit (I refuse). ISM is capable of being a good tool, but at the moment it is too large. It has become a means to legitimise an unscrupulous operator and burden the well intentioned.”

Whilst the experiences of those directly involved in the implementation process are perhaps the most relevant of all – the observations of independent third parties can be extremely valuable. This is enhanced considerably when coming from an individual who has seen ISM from a number of different perspectives such as the following Port State Control Inspector:

“As an ex-seafarer who has seen the ISM Code from all sides; as Marine Superintendent, ship’s Master and as a Regulator – I firmly believe that though ISM in itself is a good thing and if used properly will improve the safety standards of vessels – it will never work as long as the guidelines are so generic and all encompassing. Also many companies are using ISM and its procedures as an excuse for non investment in comprehensive training.

To make the system work the guidelines should be more descriptive. I carried out a PSC on a bulk carrier classed with a major Society and it's ISM manual was generic for the whole fleet which included tankers, bulkers and Ro / Ro's. I think ISM should be for individual classes of vessels not generic for fleet."

There are a number of very important issues raised by the PSCI which will, perhaps, not receive unanimous support but do deserve a response. In this section of the book however the intention is merely to flag up various issues and explain the approach which has been taken when conducting the survey and research – detailed responses to these and other issues raised in these introductory sections will appear in the relevant sections later in the book.

It may also take an external observer to adopt a dispassionate view and raise some fundamental questions – such as the one raised by a Maritime University lecturer:

"If the SMS is working, why do we have all other controls, e.g. oil companies vetting inspections etc? They don't seem to trust the system?"

There were many seafarers amongst the respondents who saw ISM as attacking their professionalism or was generally perceived to be a cause for the decline of all that had been good at sea. A small selection of some of these are reproduced below – which will provide a flavour of those perceptions – whether we may personally agree with them or not:

"ISM has created more work. ISM undermines the professionalism of the engineers engaged in their duties. ISM allows paper engineers to shine, and professionals to be considered out of date. ISM is all about paperwork, paper maintenance is easy to achieve."
British Chief Engineer

No-one seems to trust people – at one time we had Lloyds or whoever and Flag States. That was enough. Then we got; Vetting, ISO 9000, ISO 9001 now ISO 14000 + Audits + ISMA + ISM + Port State Control.

Who is going to be next to check that the rest are doing their jobs? Someone has lost the plot. We are supposed to get ships from A to B – maintain them, get the cargo in and out safely etc. Now we fill in forms. It has accomplished nothing but increased a few jobs and a lot of bullshit."
British Master

"ISM is too bureaucratic. Paperwork rules the job rather than being its servant, and has become a data base upon which lawyers can build their same old arguments. I believe ISM has contributed to the decline in morale at sea. It has suppressed individuality, with the shipowner, in practice, being no more accountable than he ever was."
British Ferry Master

"Crew standards + level of training continue to decline."

British Chief Mate

“Increased workload on Master and Chief Engineer involving ISM implementation negates half of what is meant to be achieved i.e. significant manhours lost every day just filling in forms, filing records and checklists etc. I presently sail with an ‘all-British’ crew and feel that the system is wasted. Previously I sailed with all foreign crew and the system, once understood, had some significant effect.”

British Master

“Filling up checklists has become an integral part of today’s job. However, I do feel that all officers in general and junior officers in particular need to practice good values of seamanship. This would reduce lots of accidents / near misses etc.”

Indian Master

“ISM ignored human factor – too tired of paper work!!”

Korean Chief Officer

“There is too much stress on documentation taking most of the time. Attention is more towards correct maintenance of documentation than some times actual practice being carried out.

If documentation is reduced slightly actual implementation of ISM will be more significant.

Indian Chief Mate

Again there are numerous important and controversial issues being raised in these examples. The view of the author is that many of them are based on very serious misunderstandings of the very basic principles of ISM – and are cause for serious concern. Many of the issues will be addressed and explored fully in the later sections.

For many Masters and seafarers, and indeed ship operating companies, ISM was their first encounter with ‘formal’ management systems. In some cases it would appear that little if any training or preparation was provided to explain the principles behind the idea of such management systems. Consequently, misunderstandings at that most basic level were introduced at a very early stage and it would appear that, in some cases, these have still not been addressed. A Classification Society Auditor based in the Middle East explains the problems, as he has experienced them, when attending on board vessels:

“The ISM Code has created a ‘paper chase’ on board vessels which fails to address the main problem – crew training.

Some companies assume that by having a auditable system that complies is a substitute system for good quality crew.

Audits are carried out in accordance to their documented system – ISM – just as similarly a QA audits a company – it doesn’t imply it’s good i.e. because a chocolate factory complies to its QA system – it doesn’t mean the chocolate tastes good – similarly a ISM system on a vessel doesn’t mean the vessel is any safer or good – it just complies to a auditable system – does it?”

Another Class Society Auditor reported similar experiences and also highlighted the important role of another new concept – the idea of a safety culture:

*“ISM is a quality system. To work in a quality system it is necessary to:
understand what a quality system is - believe in the quality system
be educated to the ‘safety culture’.
Safety culture is something which cannot be learned from books.”*

Perhaps not surprisingly, since the fundamental concepts of formal management systems might not be fully understood, or appreciated, the idea of a cycle of continual improvement that should be at the heart of such systems is also lacking. Part of this understanding involves identifying hazardous occurrences, near misses, non-conformities, and the like; reporting them, analysing them, finding out what had gone wrong with the system, learning lessons and implementing corrective actions. In this way the cycle of continual improvement helps to make the people involved, the ship and the company safer and more efficient.

There are of course many other ‘players’ in related industries who are watching very carefully how ISM is progressing. The insurers – both Hull and Machinery and P&I clearly have a vested interest. Surprisingly few cargo insurers seem openly to make statements about ISM – whilst they are perhaps a little removed from the immediate operation of the ship – they clearly have a direct interest in the quality and standards of ships being used to carry the cargoes they are insuring – as well as the people working on board those ships and the people ashore operating those ships. One H&M insurer, based in the Mediterranean had clearly given the matter some very careful consideration and shared his thoughts on the matter:

*“The concept of ISM is obviously a first class idea. To the very good companies it made no difference as essentially all ISM was doing was formalising what was their normal operational practice.
To other companies ISM was perceived as a bureaucratic burden and was operated with reluctance. ISM will only operate well if the owners wish it to.
On some vessels the volumes provided by the owners fill whole shelves and are clearly never read or used. A conscientious attempt should be made to limit the number and size of the ISM manuals.
The lack of continuity of service by crews who are generally supplied by agencies is not conducive to the efficient operation of ISM.
ISM has to be implemented on board as a way of life, but in reality on most vessels it is perceived as yet another paper work burden that further limits the time available to actually operate the vessel.
If there is a delay to the vessel or cargo operation due an ISM defect then it is expected that this would be held against one or more members of the crew and could lead to disciplinary action or dismissal, hence the reluctance to report defects.”
H&M Insurer – based Mediterranean*

1.1.3 Suggesting what needs to be done to move forward in a positive way to improving the management of safety on board ships

Having progressed from establishing the current status of implementation to identifying what is going right and what is going wrong – the logical next step would be to consider whether any practical suggestions could be made to those Companies, ships and individuals who might be experiencing difficulties to move forward in a positive way to improving the management of safety on board.

As the completed questionnaires began to arrive along with their narrative comments it started to become clear that there were some who had gone through such an experience and had either emerged from, or at least were coming out of, the other side with a new found conviction that ISM could work and that it could be a most useful tool for helping to manage safety on board. An Indian Master shared his experience as follows:

“ISM system is now transforming from paperwork culture to implementation culture. On board systems have been organised a lot since its implementation. Most operations are now carried out in a predetermined and planned way. It has given a systematic approach and laid down minimum safety standards to be followed. ISM system has streamlined all ship related operations on shore and ship.”

An Australian Master reported a very similar experience:

“Initially there was a lot of confusion associated with the ISM system but as time has progressed so has the system and it is now reasonably user friendly. Parts are under constant revision to ensure the safest and best practices exist at all times.”

Some respondents who were positive about the progress being made had no hesitation in making a clear link between the attitude of the Company running the ships and successful functioning of the SMS such as the following Indian Chief Officer:

“It is how your company implements the Code which is crucial in deciding how honestly and effectively the objectives of the Code are achieved. In my own experience – I feel that ship-board and shore based personnel are now viewing ISM in a more positive and serious manner and not an unnecessary pain – anymore.”

These types of reports are clearly most encouraging and many other seafarers could probably relate similar experiences. A European Flag State Administration had no doubts when it reported:

“The ISM Code is working and will improve the situation over time.”

Other seafarers would appear to have had most unfortunate experiences and it may take a considerable amount of persuasion to convince them that even if these Masters, and others are correct then ISM can work; the paperwork can be brought under control and made relevant and the ISM Code can make a significant and positive

contribution not only towards the way safety is managed on board but the way the whole ship operation is managed. In just a few words this British Chief Officer perhaps encapsulates the frustrations experienced by many:

“The only difference the ISM Code + ISO 9002 has made is a huge increase in paperwork and hence working hours.”

Many others appear to be at an earlier stage of transition from being ‘sceptics’ and the comments of this Australian Second Engineer are quite typical of many which were received:

“I believe it will take more time, a culture can not change over night. We the seafarers are trying and I am sure those results will show. A simpler documentation system is needed as the paper work has become a nightmare. These SMS are massive document driven software programmes and we need time to get to know them.”

The respondents not only flagged up the problems but many also suggested ways in which progress could be made with implementation. Some of the suggestions were based on their own learning experience and have the potential for being most useful in guiding others who are at the early stages of the learning process to help them avoid some of the pitfalls. Sometimes the advice is very simple and basic but address issues which are perhaps all too often ignored, or forgotten about, or just taken for granted. A classic example was provided by a Filipino Master:

“Communication between ship to shore is most vital importance in achieving ISM Code a success.”

Indeed, as will become evident in later sections of this book, one of the major factors which appears to be inhibiting the successful implementation of the ISM Code in some companies is an inadequate level of communication between ship and office ashore. In some cases this goes far beyond just a failure to keep in touch with each other – to out-and-out mistrust, perceptions that there is no support or interest, to feelings of isolation and abandonment. In some cases it was possible for the author to see the perceptions from both sides – to see the comments from the seafarers and to see those coming from management ashore. It was of considerable concern to see that each side had very different perceptions to the other – the message each had been trying to convey to the other had been lost somewhere along the way.

Often it was impossible not to share in the absolute despair expressed by some Masters – who had tried very hard with ISM implementation but ended up feeling as though they were trying to ‘push water up hill’. A British tanker Master expressed such despair:

*“Attempts made on the vessel to comply with ISM Code have met with little or no response from Company – and when response is received – mainly dismissive.
The other master – when I am on leave – does not bother with ISM and Company does not follow this up.”*

An issue which became apparent, from numerous responses from seafarers, was a perception that all shore management are using ISM for is to cover their own backs. A significant number stated quite clearly that in their view the shore management were

using the ISM Code to shift all the responsibility, and liability, from the office onto the ship. If such perceptions were in fact true it would of course represent a very serious situation; what is equally worrying though is that such perceptions demonstrate a fundamental misunderstanding of the ISM Code. Anyone who has read the Code could not be left in any doubt at all that the obligation and responsibility for the implementation and operation of the Code rests with the Company – and that responsibility is non-delegable. This issue will be looked at closely in due course – as well as other significant ‘misunderstandings’ and ‘myths’ that seem to have developed. Typical of the misinformed type statements is the following from a British Master:

“The ISM Code has shown senior management to be doing all that is possible to run a safe operation. Should prevent them being prosecuted. Is the operation really safer? ...I do not believe so.”

The Company has the responsibility of not only developing the structure of the SMS but also of bringing it alive within the Company - if a ship operator did believe that they could get away with only implementing the former then they would be seriously misleading themselves. Indeed they are likely to have a very serious shock coming their way if problems arise in bringing the SMS alive which results in injuries or damage.

Some third parties also seemed to share a somewhat jaundiced view of certain categories of ship operators – a P&I Correspondent put it this way:

*“I am located in a part of the world where profits rather than safety are the single biggest consideration in the operation of ships generally.
Ship operating companies see the ISM Code generally as just another piece of paper which is required to keep ships running. They do not participate in the true spirit of the Code, preferring instead to do the minimum to obtain certification.
Sorry I can’t be more positive!”*

Another ‘fundamental’ issue which started to become apparent was the crucial importance which should be attached to the employer / employee relationship and in particular the need to have a loyal and familiar crew. In other words issues relating to continuity of employment as highlighted by a Norwegian Fleet Manager:

“The key issue in respect of the ISM Code is stability of crew”

The failure to have such ‘stability’ or continuity amongst the crew will almost certainly result in the crew having no meaningful sense of ownership of the SMS – without such ownership it is difficult to understand where the motivation would come from to make the system work – and without such motivation it may have to be conceded that the most magnificently written procedures manuals in the entire industry are little more than a few thousand words typed on pieces of paper. The significance is perhaps reflected in the following observation from a British Master:

“ISM is applicable to Company systems. People operate these systems. Due to continual change out of personnel retraining in ISM is only done on board informally as and when items surface. The

code is only as good as the personnel. If no training and no continuity is achieved the objectives will never be met.”

For many seafarers the biggest ‘problem area’ which was raised was the enormous increase in paperwork they had encountered and which they attributed to the ISM Code. Whether implied or stated explicitly, clearly this would be a most important issue to address if significant progress was to be made with implementation. An Indian Chief Engineer linked the necessity to the recognition that there also seemed to be a constant stream of ever more rules and regulations coming forward with which the ships and operators had to comply:

“With impossible number of various regulations by various regulatory bodies has made the owners / operators totally sceptical about the practicality of these ISM Codes and has made them comply with these regulations not by choice but by fear of losing (the trade or business). Whereas it was the intention of the ISM Code to have the culture of safety consciousness from within and did not need to be ‘forced upon’. So time has come to sincerely review its effectiveness by all the concerned parties involved with shipping, one thing although is sure that the present situation of excessive paperwork / checklists / forms must be done away with if any long-term good is expected from this ISM Code.”

There seemed to be almost a recognition by some respondents that certain ship operators at least did require ‘policing’ and also recognised the important function Flag State and Port State Authorities may have to play in that policing role – as a Bangladeshi Second Engineer remarked:

“ISM implementation body should create continuous pressure on shipowners, managers, manning agents and marine industry related personnels for implementing the Codes to maintain safer sea life.”

It also became apparent that many respondents seemed to be in little doubt that standards differed considerably with ISM Implementation – not only between ship operating companies but also between Flag State Administrations, Classification Societies and Port State Administrations. Numerous first hand examples have been provided which seems to confirm that these are very serious issues which need addressing. With such perceptions in mind it is perhaps understandable that some seafarers and ship operators are despondent to say the least. One British Chief Engineer clearly feels very strongly about the significance of such inequalities:

“I find it worrying that very different standards exist between different ‘issuers’ of DOC’s and whilst some ship owners have expended a great deal of time and money to produce a viable ISM system – others have produced something that is totally inadequate. Until this dual standard is rectified honest Shipowners are at a considerable disadvantage. I do not know why I and my officers should spend a good deal of valuable time on a minimally manned ship completing paperwork that has little if any value, does not make this vessel any safer or more efficient than prior ISM.”

I would urge that ISM is consigned to the dustbin of history where it deserves to be – unlamented and unloved.”

Some respondents seemed to have very clear ideas of where the ‘blame’ lay for the apparent failure of ISM and whilst they had ‘suggestions’ about what should be done they were perhaps less than constructive in their suggestions for finding solutions. The opinion put forward by one British Master provides a good example:

“Best to get the present laws enforced before bringing in new ones. ISM was a good tool but has been corrupted by incompetent third world substandard Class and Flag authorities. Time to get the ‘IMO’ act together and sort this unholy mess out.”

An interesting ‘general’ overview of what, in the opinion of this particular contributor, was going wrong and some suggestions on what might need to be done to put things right, was put forward by a surveyor working in the Far East:

“Broadly speaking I consider the ISM affected companies as follows:

Good / first class operators who never needed ISM in the first place have implemented fully and is operating well.

Medium class operators. Typically they asked ‘experts’ to set up the system. The ‘experts’ set up an over-complicated system that is almost impossible to implement effectively. Little or no benefit has been gained except that all ships have a list of designated persons to contact in case of emergency.

The cowboys. To them it is just another certificate. Typically ship’s staff do not take an active part in ISM. All reports are filled in after prior consultation with head office (the head office tell them which section has to be completed) The shipboard manuals are never read.

The shipboard manuals are generally too big and complicated. In some cases the crew cannot even understand the language in which they are written. Ship’s staff complain about the amount of paperwork involved.

Too much time spent in form filling and too little on the job. It can at times be dangerous for ship’s staff to have to give priority to form filling over and above the safe and efficient execution of their duties. How many big accidents will be caused by form filling will remain to be seen, but some day people will realise the negative impact of safety on form filling and hopefully do something about it.

Checklists are futile. A checklist is only as good as the man and pencil ticking little boxes. If the man is competent why does he need a checklist? It would appear that the ISM Code is assisting operators employ cheap low skilled crews with the benefit that they can get adequate on board training with checklists. Senior personnel have a difficult job onboard running ships with these inexperienced ‘check list crews’ who invariably have not received proper shore based training.

The implementation of the code on sub-standard ships, typically eastern block is leading to the shifting of much tonnage to

recognised managers. I expect the reputation of some of the leading management companies will be damaged by this shift.

Finally I have three recommendations for the future of ISM:

- *simplify it down to the bare safety necessities*
- *make operators responsible for ensuring that the crew they employ fully understand and can operate the on-board system before they join the vessel*
- *take ISM matters away from Classification Societies – they already have enough on their plate with Class and Statutory Certificates, and let's face it the job they did was a complete balls up in the first place. It is time other bodies kept an eye on these Classification Societies."*

Contained within the last opinion are many controversial and indeed radical ideas and proposals. This is the case with many of the comments that have been received from Masters, Seafarers, Ship Operators and many others involved in the industry who responded to the survey and provided their valuable input. It is many of those observations and proposals that will be examined in more depth in the later sections of this book. However, at this juncture the background and underlying concepts behind the ISM Code will be considered in more detail. It is suggested that a good grasp of these issues will be crucial if the analysis of the survey and a full appreciation of the extensive comments and suggestions received from the respondents can be made.

1.2 Background to the ISM Code

Commercial shipping is very old – certainly there is evidence of trading ships existing more than 2500 years before the Christian era. To a very large extent the shipping industry has been self-regulating throughout this very long history. Traditionally ships would be subject to the laws, rules and regulations of the flag state to which they belonged. They would also be obliged to comply with the local laws of the countries they visited. During the period from the early 17th century to the latter part of the 20th century it was quite true that 'Britannia ruled the waves'. The Merchant fleet of Great Britain dominated international trade – along with the fleets of other colonial powers such as France, Holland, Spain and Portugal. The merchant marine was a vital factor in the development of international trade, the expansion of the Empire and the prosperity of the nation – as well as a number of individual businessmen. Anyone who had sufficient funds could purchase a vessel and enter the business of shipping.

Britain became a centre for the development of maritime law and marine insurance and since it was so influential in international trade it was very much the British rules that applied internationally. The ships were often armed with canon and carried marines – they were run very much along the disciplined lines of the Royal Navy. Against this background the Shipowners were allowed to run their companies with little supervision by the government – provided they obeyed the law.

The origins of international maritime conventions can be traced to the late 19th century and early 20th century. However it was not until the years following the Second World War, with the formation of the United Nations that commercial shipping started to become more regulated on an international level. The United Nations Convention on the Law of the Sea, 1982 (UNCLOS) establishes the general rights and obligations of the flag State. Within the United Nations two specialised agencies deal with maritime affairs; the International Maritime Organisation (IMO)

and the International Labour Organisation (ILO), and they have a responsibility for devising and developing conventions and guidelines under which ships can be regulated. In general, matters concerning safety at sea, pollution prevention and training of seafarers are dealt with by IMO, whereas the ILO deals with matters concerning working and living conditions at sea. While IMO and ILO set the international regulatory framework for ships, each member State bears the responsibility for enforcing the international conventions it has ratified on the ships flying its flag.

However, the industry was still allowed to regulate itself within the confines of these conventions once ratified by their flag states as well as other elements of the domestic law of that country.

Up until the period following the Second World War almost all merchant ships would fly their own national flag. However, led by Shipowners from the United States, an increasing number re-registered their ships and their companies in countries where their application of rules and regulations were a little more relaxed or provided tax advantages – these were the so called Flags of Convenience (FOC's) or Open Registries. From inception the FOC's were perceived by many as an opportunity to lower the very high, but costly, standards that had been maintained on board the national flag fleets. Even so, during those post war years there were fleets to rebuild and trades to re-establish which meant that the merchant ships were fully employed in helping to bring the world back to normality.

In the late 1960's, when the author first went to sea, a 15,000 ton general cargo ship would typically have a complement of 65 officers and crew on board. Most officers, if not crew members, would be on long term company contracts and it was not at all unusual for a seafarer to remain with the same family shipping company for his entire career. The loyalty, which was reciprocal as between employer and employee, was very strong – the ships were well run with good, well-qualified and motivated seafarers.

During the second half of the 1980's/early 1990's, there seemed to be an explosion of maritime accidents and claims generally, with a significant number of high profile major incidents, some of which appear in the following list.

- 1987 'Herald of Free Enterprise' capsized off Zeebrugge. 190 people lost their lives.
- 1987 'Dona Paz' ferry collided with tanker in the Philippines - estimated 4,386 people killed.
- 1989 'Exxon Valdez' ran aground off coast of Alaska spilling 37,000 tonnes of oil causing extensive environmental damage. Final claims level possibly exceeding US\$10 billion.
- 1990 'Scandinavian Star' ferry disaster. 158 people died.
- 1991 'Agip Abruzzo' with 80,000 tonnes light crude on board in collision with ro-ro ferry 'Moby Prince' off Livorno, Italy. Fire, pollution and 143 persons died.

- 1991 'Haven' fire and explosion off Genoa. Claims in excess of US\$700 million.
- 1991 'Salem Express' Egyptian ferry struck reef and sank. 470 people killed.
- 1992 'Aegean Sea' broke in two off La Coruna, Spain. Extensive pollution. Claims approaching US\$200 million.
- 1993 'Braer' driven onto Shetland Islands - widespread pollution. Claims in region of US\$200 million. Donaldson Inquiry set up in UK.
- 1994 'Estonia' ro-ro passenger ferry sank after bow door fell off during heavy weather at sea. 852 people lost their lives.
- 1996 'Sea Empress' major oil pollution off Milford Haven, UK.

1.2.1 Problem - an accident and claims explosion

During the period 1987 to 1990 P&I insurance claims, and consequently the cost of P&I insurance rose on average by 200 - 400%. It is understood that a similar phenomenon was also experienced with Hull and Machinery claims and premiums.

It became apparent that the international shipping industry was perhaps no longer capable of regulating itself and action was needed to reverse the downward spiral of maritime calamity.

It was against the background of this catastrophic situation that the author first became involved in looking at the problem of maritime accidents and to consider what he could contribute to help remedy the situation

Various reports were commissioned by government agencies and by industry to try and provide an explanation as to what might be behind this problem.

By the late 1980's alarm bells were ringing in many quarters – the shipping industry seemed to be in a disastrous state and few could provide any rational explanation as to what was going wrong. Numerous investigations and reports were commissioned to try and throw some light on the problem. For example in 1988 the UK Department of Transport funded research which was carried out by the Tavistock Institute and which led to the report 'The Human Element in Shipping Casualties' (Department of Transport, 1991). The conclusions of that report were taken to the IMO by the then Surveyor General's Organisation (SGO) whose role was later taken over by the Marine Safety Agency (MSA). In 1991 the world's largest P&I Club - the United Kingdom Mutual Steamship Assurance Association (Bermuda) Limited - through its managers Thomas Miller P&I - who provide P&I insurance to approximately 25% of the world fleet - issued its first 'Analysis of Major Claims' (the UK Club, 1991). In 1992 the House of Lords Select Committee on Science and Technology, under then the Chairmanship of Lord Carver, issued its report on the Safety Aspects of Ship Design and Technology (House of Lords, 1992).

1.2.2 Cause – human error

A common factor was appearing in each report which was basically that these accidents and incidents were primarily arising as a result of human failings. For example, in the 'Human Element in Shipping Casualties' report, it was stated that the human element was found to be causative in over 90% of collisions and groundings and over 75% of contacts and fires/explosions. The UK Club report concluded that human error accounted for 58% of all claims and the House of Lords/Carver Report concluded at Section 4.2 that "... It is received wisdom that four out of five ship casualties - 80% - are due to 'human error".

On reflection these conclusions should not have come as any great surprise. Whilst statistical data is probably not available, it is suggested that 'human error' or 'human factors' or whatever other title one wishes to label the phenomenon, have been responsible for almost all maritime accidents throughout history and that the figure is probably much closer to 100%. The deciding factor would depend where the investigator/researcher stopped in tracing the particular causal chain for any particular accident. Part of the problem was the fact that there were more accidents and claims which were costing more in terms of lives, environmental damage and money than ever before and the situation seemed to be getting worse. The problem was much more complicated than that though.

At the end of the day the real problem was economics – almost the whole of the shipping industry was in deep economic recession. This had major knock-on effects as the industry tried to survive in such very difficult financial times. The nature of the economic problem is quite easy to understand – it was the most basic of economic principles – the law of supply and demand. Basically there was a surplus of ships for the number and volume of cargoes to be carried. Many traditional Shipowners sold their ships and got out of the industry. Others looked for ways to cut their operating costs to levels that might allow them to at least break even with the very low freight and charter-hire rates that they were being offered.

Flying the national flag often involved restrictive practices with regard to labour laws and such things as compliance with safety related legislation. A flood of ship operators therefore deregistered and hoisted strange flags of convenience on their ships – registering the owning company as a 'one ship company' with a brass nameplate on a doorway in some tax friendly country.

The wages bill was an obvious and immediate target – both in the offices ashore and with the seagoing staff. In the office ashore marine superintendents, who had provided a vital link between ship and shore, found themselves redundant. Safety, training and personnel officers ceased to exist almost overnight. Legal and claims department staff found themselves expendable and 'assistants' within the various departments were looking for other employment. Those who were left – the operations manager and technical superintendents, had to try to continue doing their own jobs but also the jobs of all those who had been casualties. On board ship the situation was even worse!

The traditional seafarers of the UK, Scandinavia, Northern Europe and the Mediterranean were perceived to be too expensive. Cheaper labour supplies were identified in 'developing' nations – particularly in South East Asia. In a very short period of time the highly skilled and well qualified 'traditional'

seafarers were displaced with seafarers having little basic education and even less maritime education and training. Of equal concern was the fact that the actual numbers of personnel on board were being reduced significantly which compounded the problem. Quite typically the number of officers and crew were being reduced by between one half and two thirds.

People were not the only cost cutting target though. The ships themselves were built to have a typical trading life expectancy of about 15 to 20 years – after which they would be scrapped and replaced with new buildings. New buildings were prohibitively expensive and so the ships were being traded well beyond their ‘natural life’. Simultaneously, maintenance budgets were being slashed – without vital maintenance the condition of the ships would quickly deteriorate resulting in an increased risk to people, the cargo being carried and indeed the ship itself. To compound this problem of older ships receiving less and less maintenance was the apparent relaxation of standards by the Classification Societies. The Societies had performed two very important roles for many, many years. Firstly they carefully monitored the construction and maintenance of ships which provided a type of ‘risk assessment’ and assurance / guarantee for the Hull and Machinery and P&I insurers. Secondly, acting on behalf of various flag states, they monitored and assessed the compliance by the shipping company with a whole range of important safety related legislation. The Societies, however, are financed, and consequently their activities are strongly influenced by, the ship operating industry.

There were other factors as well which were all contributing to a cocktail of disasters for the shipping industry. However, the key factors were people and management systems.

The core issues were identified by the Secretary-General to IMO in a Briefing dated 28.6.2002 – ‘Shipping enters the ISM Code era with second phase of implementation’ – when Mr O’Neil said: ‘...Previously, IMO’s attempts to improve shipping safety and to prevent pollution from ships had been largely directed at improving the hardware of shipping - for example, the construction of ships and their equipment. The ISM Code, by comparison, concentrates on the way shipping companies are run.’ - he continued ‘...this is important, because we know that human factors account for most accidents at sea - and that many of them can ultimately be traced to management. The Code is helping to raise management standards and practices and thereby reduce accidents and save lives’.

1.2.3 Solution – management systems

Efforts to address the problem had already started a little earlier. In July, 1986, for example, following publication of the report on the loss of the MV "Grainville", the British Government issued "M Notice 1188 (This was subsequently up-dated and superseded by M Notice 1424 in August, 1990) entitled "Good Ship Management". This commended the publication entitled 'Code of Good Management Practice in Safe Ship Operations' issued by the International Chamber of Shipping and the International Shipping Federation.

The tragic loss of the MV "Herald of Free Enterprise" in March, 1987 resulted in the introduction of the "Merchant Shipping (Operations Book) Regulations 1988 which were laid before Parliament and came into force in December that

year. These Regulations are applicable to all UK passenger ships on short sea trade (Class II and IIA) and were developed around the two central tenets of:

- all such ships shall carry an 'operations book' containing instructions and information for safe and efficient operation, and
- owners being required to nominate a person (known as the Designated Person) to oversee the operation of their ships and to ensure that proper provisions are made so that the requirements of the operations book are complied with.

M Notice 1353 was issued in October 1988, giving detailed guidance on how compliance with these regulations could be achieved. Attention was also drawn to M Notice 1188 and the 'Code of Good Management Practice in Safe Ship Operations'.

At the 57th session of the IMO Maritime Safety Committee (MSC) in May, 1989, the UK delegation pressed, unsuccessfully at that time, for the draft guidelines contained in MSC 56/WP.4 (this working paper was ultimately adopted at the 16th Assembly, in October, 1989, as resolution A.647(16) and is the forerunner to the ISM Code) to include the two principles upon which the Merchant Shipping (Operations Book) Regulations 198/8 were founded.

Further impetus was given to the need for these amendments to SOLAS when fire swept through the Norwegian passenger/car ferry MV "Scandinavian Star" in April, 1990 with the loss of 158 lives. That tragedy initiated the action within the IMO that resulted in the inclusion of paragraphs "4.7 Designated person ashore" and "4.8 Operations documentation in resolution A680(17) which was adopted on 6 November, 1991 revoking resolution A.647(16).

At the 18th session of the IMO Assembly on 4 November, 1993, resolution A.741(18) was formally adopted. This revoked resolution A.680(17) and constitutes verbatim the International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code). This was incorporated on 19 May, 1994 into the SOLAS Convention 1974 as Chapter IX - entitled 'Management for the Safe Operation of Ships' making compliance with the Code mandatory in states that are signatories to SOLAS for various classes as follows:

- Ro-ro passenger ferries operating between ports in the European Union by 1 July, 1996 - pursuant to a regulation of the Council of the European Union;
- Passenger ships including high-speed craft, not later than 1 July, 1998;
- Oil tankers, chemical tankers, gas carriers, bulk carriers and cargo high-speed craft of 500 gross tonnage and upwards, not later than 1 July, 1998; and
- Other cargo ships and mobile offshore drilling units of 500 gross tonnage and upwards, not later than 1 July, 2002.

(The Code does not apply to government-operated ships used for non-commercial purposes).

Alongside Resolution A.741(18) – The International Safety Management (ISM) Code – the IMO also developed Resolution A.788(19) – Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations – which was adopted on 23 November 1995. Resolution A.788(19) was intended to provide the Flag State Administration with a set of outline guidelines which they could use when looking at the SMS's of the shipping companies and ships under their flag to verify compliance with the ISM Code and the issuance of the DOC's and SMC's. The intention was to introduce some uniformity and consistency into these processes on an international level. It is important to understand however that these were 'guidelines' only without any mandatory or compulsory status. It would appear that the intention of the authors and architects of the Code was that the two resolutions would sit side by side and complement each other.

Resolution A.788(19) did appear to be taken on board by many Administrations but did lead to a certain amount of confusion. The opportunity was therefore taken at the December 2000 meeting of the IMO Maritime Safety Committee meeting – MSC.99(73) – to amend the text of the ISM Code (Resolution A.741(18)) to specifically include a number of provisions from Resolution A.788(19) and to replace that Resolution with a new draft A.913(22). The new Code and amended Resolution came into full force to coincide with Phase 2 implementation on 1st July 2002.

The original intention of IMO was that the Flag State Administrations would be the bodies undertaking the verification and certification on board the ships flying their national flag. A limited number of Administrations did undertake this work but the IMO recognised the increasing dominance and influence of the Flags of Convenience (FOC's) and the fact that many of the FOC's had very limited infrastructure actually to undertake this task. Accordingly IMO built into the text of SOLAS Chapter IX and Resolution A.733(19) flexibility to allow Administrations to delegate the actual task, but not the responsibility, of the verification and certification to 'recognised organisation' (R.O.'s) or to other Administrations. Almost all FOC's, and many national Administrations, delegated to the Classification Societies and a small number of independent consultants. Many of these same Societies and Consultants had also set up consultancy companies in which they were selling their expertise to ship operators to set up, develop and write their safety management systems. There were, and still are, many in the industry who considered this dual role runs the risk of a very serious conflict situation arising. Those who were setting up the systems were then examining their own efforts and issuing certificates – many questioned the objectivity and indeed the ethics of such a practice. The implications and significance of this somewhat incestuous situation were to figure in the findings of this research.

1.3 The Philosophy of the ISM Code

The stated objectives of the Code are initially set out in the first paragraph of the Preamble to the Code which provides:

"The purpose of this Code is to provide an international standard for the safe management and operation of ships and for pollution prevention".

This initial statement is expanded and the objectives are set out in full in Section 1.2.

1.2	Objectives
1.2.1	The objectives of the Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment and to property.
1.2.2	Safety-management objectives of the Company should, <i>inter alia</i> : <ul style="list-style-type: none">.1 provide for safe practices in ship operation and a safe working environment;.2 establish safeguards against all identified risks; and.3 continuously improve safety-management skills of personnel ashore and board ships, including preparing for emergencies related both to safety and environmental protection.
1.2.3	The safety-management system should ensure: <ul style="list-style-type: none">.1 compliance with mandatory rules and regulations; and.2 that applicable Codes, guidelines and standards recommended by the organisation, administrations, classification societies and maritime industry organisations are taken into account.

1.3.1 A change of perspective on rules and regulations

The author agrees with the points raised in the Intertanko document (Tatham) when they discuss the factors which led up to the Code's objectives being formulated. At paragraph 3.2 they explain "... The Code was produced in response to potential pressure, following a number of high profile incidents, for the shipping industry to clean up its act, the perception being that the existing rules and regulations were not in themselves sufficient to ensure a real diminution in the number of shipping casualties - in particular it was felt there was a need to reduce the scope for human error by imposing an industry standard of good management ...".

The whole intention of the ISM Code has been summarised so well by Lord Donaldson when he said "... In the short and medium term, it (the ISM Code) is designed to discover and eliminate sub-standard ships, together with sub-standard owners and managers, not to mention many others who contribute to their survival and, in some cases, prosperity ...".

He continues "... In the longer term its destination is to discover new and improved methods of ship operation, management and regulation which will produce a safety record more akin to that of the aviation industry. But, as I readily admit, that is very much for the future ...". (Donaldson)

The ISM Code is concerned with procedures whereby the safety and pollution prevention aspects of a ship are managed, both ashore and on board, rather than laying down specific rules as to the technical condition of the ship itself. There are of course numerous sets of rules, regulations and conventions dealing with technical issues which a shipowner will need to comply with. Indeed the full significance of section 1.2.3 can be easily overlooked and certainly under-estimated. The Code is not necessarily introducing any new sets of rules and regulations, but rather provides a requirement that the SMS should be structured such that it can check and verify compliance with all the various existing rules and regulations. Such rules and regulations would include, by way of examples, Load Line Regulations, Radio Regulations, Collision Regulations, MARPOL, the other chapters of SOLAS, Classification Society Rules, STCW and a host more. A misunderstanding which seems frequently to arise in the minds of many people is to think that the ISM Code has suddenly become an all encompassing, all embracing piece of legislation, incorporating all these various sets of rules, regulations, conventions and legislation. The Code does not incorporate them at all although it is a breach of these regulations that principally gives rise to exposure. What the ISM Code does - as stated in its objectives - is to make a requirement that the Safety Management System will provide procedures by which a company can check that it does comply with the various rules and regulations and procedures to check and verify that they continue to comply. Another important point to understand is that these procedures must be documented and recorded. In this regard it is perhaps worth noting the contents of section 2.3.2 of Resolution A.913(22) which states:

"All records having the potential to facilitate verification of compliance with the ISM Code should be open to scrutiny during an examination. For this purpose the Administration should ensure that the Company provides auditors with statutory and classification records relevant to the actions taken by the Company to ensure that compliance with mandatory rules and regulations is maintained. In this regard the records may be examined to substantiate their authenticity and veracity".

1.3.2 Flexibility within the system

To understand fully how the stated objectives should be interpreted, it is very important to understand the significance of paragraphs 4 and 5 of the Preamble. These read:

Preamble

4. Recognising that no two shipping companies or shipowners are the same, and that ships operate under a wide range of different conditions, the Code is based on general principles and objectives.

5. The Code is expressed in broad terms so that it can have a widespread application. Clearly, different levels of management, whether shore-based or at sea, will require varying levels of knowledge and awareness of the items outlined.

It is of considerable credit to the draftsmen of the Code that they intentionally drafted it in such broad terms. Having achieved that, the general principles which are set down are of widespread application to all types of ship and owner. The very general terms in which the ISM Code is written do need to be understood within the context of the "safety case" as proposed by Lord Carver. This was put very well by Lord Donaldson when he said "... what the ISM Code seeks to do is to superimpose a safety case regime which is regulatory in the sense that it is compulsory and is intended to be fully enforceable, whilst being specific only in its general requirements ...". (Donaldson)

The other important point to recognise is that the Code does not anticipate all levels of management, either ashore or on board, to necessarily have the same levels of knowledge and awareness of safety and environmental issues.

If one needed an explanation as to why it was considered necessary to look afresh at the way maritime safety was managed which moved away from a regulatory framework to one based upon a "safety culture", one would only need to reflect upon the sobering and appalling rate of bulk carrier losses. During the period 1980 - 1997, there were reportedly 167 bulk carriers lost and what is infinitely worse and unacceptable is that 1,352 lives were lost on those vessels.

1.3.3 Safety and environmental protection policy

The ISM Code requires the Company to provide, in clear and concise terms, a statement describing what its aims and intentions are with regard to its SMS along with outline details of how those aims and objectives are to be achieved. The requirements of the Code are set out in Section 2:

- 2 SAFETY AND ENVIRONMENTAL PROTECTION POLICY**
 - 2.1 The Company should establish a safety and environmental-protection policy which describes how the objectives given in paragraph 1.2 will be achieved.
 - 2.2 The Company should ensure that the policy is implemented and maintained at all levels of the organisation both, ship-based and shore-based.

1.3.3.1 Implications for the company

The significance and importance of the Safety and Environmental Protection Policy should not be underestimated - for it may come under very close scrutiny if a major incident occurs.

The policy is basically a statement by the Company to the Company and all its employees whether ashore or on board. It is recommended that the policy should be signed by the Chief Executive or similar head of the organisation to demonstrate the commitment from top level management. It should also be regularly reviewed.

It is very important that the statement in the policy really does voice the intentions, aspirations and commitment of that particular company rather than some eloquent prose provided by some so-called consultant selling "off-the-shelf" Safety Management Systems.

From a practical point of view such a policy would be needed in order for the Company to have credibility with its personnel with regard to its commitment to safety and the protection of the environment. From a pragmatic point of view it should be anticipated that if an incident did arise involving the Company then the press and media would certainly scrutinise the policy most carefully and use it to criticise, ridicule or condemn the Company.

For different, but related reasons, the courts would also look very carefully at the policy statement as well as the historical track record of the Company in light of the policy statement.

Some flowery standard worded bought off-the-shelf policy statement could cause considerable embarrassment indeed to a company.

1.3.4 The safety management system

It would not be an overstatement to claim that what the ISM Code is all about is the development and implementation of a Safety Management System (SMS).

The responsibility is upon the owning or operating company to develop, implement and maintain not only a written but a living, dynamic, Safety Management System covering a whole range of safety, environmental and related matters. The functional requirements are listed in Section 1.4 of the Code and are then explored in more detail throughout the rest of the Sections of the Code.

1.4 Functional requirements for a safety-management system

Every company should develop, implement and maintain a safety-management system (SMS) which includes the following functional requirements:

- .1 a safety and environmental-protection policy;
- .2 instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag state legislation;
- .3 defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;
- .4 procedures for reporting accidents and non-conformities with the provisions of this Code;
- .5 procedures to prepare for and respond to emergency situations; and
- .6 procedures for internal audits and management reviews.

1.3.4.1 Implications of the functional requirements

The functional requirements as set out in Section 1.4 of the Code are really just the main chapter headings of the ISM Code - the named organs as it were of the SMS. They are not intended to be an exhaustive list but rather represent the minimum requirements of an acceptable Safety Management System.

It is the structure, implementation and working of the SMS which will be the real deciding factor of whether or not a company is complying with the ISM Code.

1.3.4.2 Getting inside Safety Management Systems

The greatest strength of the ISM Code is simultaneously its greatest weakness. It is arguably the single most important and influential piece of maritime legislation ever to have been enacted on an International scale, yet the Code itself is set out in 16 short sections on fifteen pages in an A5 size booklet. Its greatest strength lies not only in its simplicity but in its flexibility; the original draughtsmen on the IMO (the International Maritime Organisation) working party produced a set of very general principles and objectives, with a wide spread application, which could be interpreted and implemented by each individual shipping company or shipowner or ship as may be most appropriate to the way in which that operator managed its company and its ships. The intention was that compliance would be 'individual' and there would be considerable latitude and freedom in producing a Safety Management System (SMS) which would be most suitable for that individual operator. Of course each individual company and ship would be bound by those general principles and objectives, as well as all the other pieces of international and national legislation, industry and insurance rules and regulations and other contractual terms. The point is though that the ISM Code allows each operator to do it their own way.

The other side of that coin though produces what is perhaps the greatest weakness of the ISM Code; with so many 'individual' interpretations and applications of the Code how is it possible to objectively measure compliance? This aspect perhaps needs

splitting into at least two component parts to demonstrate the complexity of the issue under consideration – verification of initial compliance, and post implementation. We must consider not only verification of compliance as far as setting up the initial SMS is concerned – for which the Documents of Compliance (the DOC's) would be given to the operating Company and the Safety Management Certificates (the SMC's) to the ship – but much more difficult to measure is the subsequent monitoring of successful implementation. Complicating the matter even further, the determination as to whether an individual ship operator and / or ship complied and had implemented an acceptable SMS was made the responsibility of the individual Flag State Administrations – i.e. the Government of the Flag which is flown by the particular ship. Whilst IMO promulgated 'Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations' in 1995 by way of Resolution A.788 it was still left to each Administration to decide how closely, if at all, they would follow those 'guidelines'. Complicating the issue yet further, Flag States can delegate the task, but not the responsibility, to third parties to undertake the verification process and implementation on their behalf. IMO Resolution A.739(18) 'Guidelines for the Authorisation of Organisations Acting on Behalf of the Administration' became mandatory by virtue of the new SOLAS chapter IX and Resolution A.740(18) – 'Interim Guidelines to Assist Flag States' – whereby Administrations can authorise organisations to issue DOC's and SMC's on their behalf. Those 'other' organisations became referred to as 'Recognised Organisations' (RO's) and, understandably, they would also have their own interpretations to apply. As a vessel moves around the world, from country to country, it is quite likely that it will be visited by inspectors from the local Port State Control (PSC), or similar body, who may wish to satisfy themselves that the ship complies with the requirements of the ISM Code. Clearly each individual PSC will have its own 'bench mark' against which it measures acceptable compliance and that is possibly based on the criteria decided by the Government of that country when considering ISM from its position as Flag State Administration. Compliance of any individual SMS could therefore be determined by the opinion of the ship operator, or more correctly 'the Company', the Flag State Administration or RO and possibly PSC.

Experience suggests that objective standards have varied widely from Company to Company, from Flag to Flag and from PSC to PSC. It has been suggested that some Companies have 'switched' flag or in some cases the RO in order to obtain more easily the DOC's and SMC's and it has even been reported that DOC's and SMC's can be bought from certain Administrations with little or no verification having taken place at all!

How does one objectively ascertain and measure compliance with an International Code when there are so many different subjective interpretations actually determining compliance? Establishing that the DOC and SMC exist merely confirms that the particular Administration deemed it appropriate to issue those particular certificates – whether that is the same as saying that the SMS would satisfy any other Administration's verification criteria is, perhaps, another matter – in some cases those certificates may be nothing more than worthless pieces of paper.

Of course there may be situations which manifest themselves external to the SMS which might provide an indicator with regards to compliance, or non-compliance as the case may be. If, for example, defective, badly maintained or missing safety equipment is evident, this would suggest not only a failure to comply with Load Line Regulations or other sections of SOLAS but also a failure of the management system which should have had provisions with regard to planned maintenance, inspections,

testing and auditing to check that those systems were working and effective. Such deficiencies with equipment may result in the vessel being detained by PSC.

However, such a manifestation may only indicate, or highlight, that there appear to be deficiencies in certain parts of the SMS – albeit very important areas – and it maybe that other parts of the SMS are working very well.

Another external indicator might be the record of accidents, incidents and claims either for the Company as a whole or the individual ship. If the trend is clearly downwards then it may suggest that the benefits are being reaped, if the trend is in the other direction then maybe this would indicate that some further adjustment may be needed with the SMS.

We must be careful though not to jump too quickly to what may appear obvious conclusions. However tempting it may be, we should not underestimate what is involved in the implementation of the ISM Code. The philosophy underpinning the ISM Code will require all the seafarers around the world, their employer, their legislators and their regulators to change their whole approach to how they undertake their job. For some this will be a much bigger change than it will for others. Such a change will not happen overnight – for some it may take a long time. There may also be other, less obvious, external factors occurring which may be distorting the overall picture. One such factor could be the increasing tendency of individuals to litigate and pursue claims with an expectation of a ‘pay out’ regardless of merits or genuine claimants with an expectation of a very high level of settlement. We are living in a more litigious society and this factor is having a marked effect on insurance claims.

We can therefore consider evidence derived from, say, PSC inspections / detentions, or Class records or insurers claims statistics as providing an indicator with regard to ISM compliance but with some serious reservations as to its full significance. Some of this evidence will be explored and its significance considered in much more detail in Chapter 2.

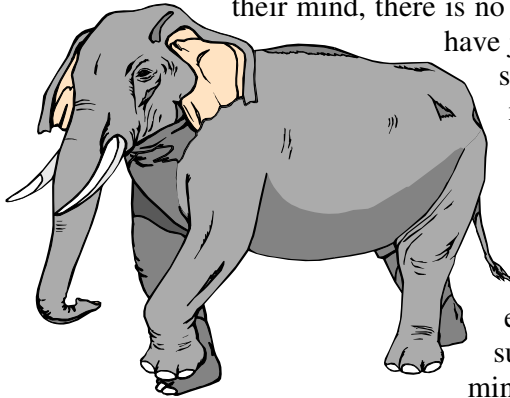
If it is accepted that each SMS is different and individual, and hence direct comparisons with a master ‘blue-print’ will not be possible and that the manifestation of external problems and accident / claims statistics are at best mere indicators that the SMS may or may not be having a desired effect – we need to ask ourselves if there is any other way in which the working SMS can be observed or measured.

The ISM Code was conceived in response to the recognition that the vast majority of all accidents and incidents at sea can be attributable to ‘human factors’ – some might use the term ‘human error’. Underpinning the ISM Code and the Safety Management System is the idea of a ‘safety culture’ being developed amongst those in the Company ashore and amongst those working on board ship. It is suggested, and it is the basis upon which the research project behind this book was based, that the only way to observe if the SMS has been successfully implemented is to get inside the SMS, into the safety culture to seek the views and perceptions of those directly involved with the implementation.

By combining the observation of the SMS from the inside with the data available relating to external manifestations we can produce a reasonably clear ‘big picture’ of the current status of ISM implementation. We can identify where problems exist, the extent of those problems, what solutions might be available and what remedies may already have been found or what may need to be prescribed.

Without the creation of this 'big picture' – where progress can be demonstrated -there must be a risk that the greatest weakness of the ISM Code – its deliberate avoidance of having detailed, standardised sets of rules and regulations as a 'bench mark' against which compliance can be more easily measured (as some may claim) may be used by some to impose those detailed rules and regulations and virtually take away the latitude and freedom which each individual ship operator currently enjoys.

There remains though, perhaps, a legitimate questions to ask: 'With such a diversity and proliferation of Safety Management Systems in existence, how will it be possible to be sure that any particular system has been adequately created, developed and implemented effectively? If there is no 'model' or 'ideal' SMS ' against which to measure other systems, how can we assess which is a good system? – which is a bad system? – which system is efficient? Which system is inefficient? These are fair and reasonable questions to ask. The answer can perhaps be best explained by way of an analogy: imagine trying to describe an elephant to someone who had never seen such an animal – this would not be an easy task and the mental picture the other person may form of this strange animal may actually be far different from the real thing. However, once that person sees an elephant for the first time there is no mistake in their mind, there is no doubt, they know exactly what it is that they



have just encountered. Subsequent encounters with similar animals makes them easily recognisable but that person would have the same difficulty describing the elephant to anyone else who had not been so fortunate to have had the first hand direct experience of an encounter! In the same way when a good, working, dynamic, living SMS is encountered there may be some pleasant surprises but there will be few doubts in the mind of the individual who is having the

experience as to what it is that they have come across.

One of the first and perhaps most influential experience of this nature encountered by the author was a visit to a medium sized tanker operator a few years ago. The Managing Director of the Company had specifically asked to meet with his visitor upon arrival. After a brief exchange of pleasantries the MD, clearly very pleased and proud about something, launched into a somewhat disjointed description of how well his company was now doing; the accidents and claims were on their way down, morale was up and, he confided with a smile as wide as a Cheshire Cat, that profits were up! He unreservedly attributed the good times being experienced by the Company to the ISM Code – to quote him, almost verbatim, "I wish we had done this ISM thing years ago". Clearly there was one person in the Company who was most upbeat about the ISM Code and it was difficult not to be affected and impressed by the MD's open enthusiasm. That was only the beginning though. The MD had organised a meeting with his in house lawyer, accountant, technical managers, operation managers, safety managers and others. The MD's support for ISM was very clearly reflected in each of the other executives and managers at that meeting. The ISM 'bug' was clearly contagious in that Company - they had seen the advantages of making a total and unequivocal commitment to safety and the Company was now seeing the benefits. The support and leadership was from the very top was unambiguous and everyone was on the same 'song sheet' and at the same party! Without the need for a close examination of the procedures manuals or the records of

reporting hazardous occurrences or inspecting any of the detail – it was clear that what was being experienced here was the shore based side of a very successfully implemented Safety Management System. It is only by a personal experience of the aura and the ‘buzz’ in such an environment that anyone could really grasp the living and dynamic nature of such a management system. Unfortunately the author has not yet had the opportunity of visiting any ships of that Company but would be very surprised if the enthusiasm of the MD and the management ashore had not had a most profound and positive effect on board.

The problem was, therefore, how to get inside as many Safety Management Systems as possible to see how those systems were structured and functioning. To achieve that end would require soliciting the views of a very wide range of individuals who were directly or indirectly involved in the running of those systems. Logistically it would not be feasible to meet sufficient individuals face to face to discuss their views and therefore other arrangements would have to be put in place to canvas the wide range of views needed. A major survey of the entire international shipping industry and related professions was conceived which would involve a number of different methods of approach.

It was recognised at an early stage that this research project would be the first major study into the implementation since the first phase compliance deadline of 1st July 1998 – although there had been a number of limited surveys on related issues. In an attempt to apply rigorous objectivity and sound research practices to the survey methodology the author decided to conduct the research under the guidance and supervision of a University. To this end he registered the project with the National Centre for Work Based Partnerships with the Middlesex University where the results of the research would be submitted towards a Doctorate in Professional Studies. The timing of the project was such that it would coincide with the run-up to the phase two implementation deadline of 1st July, 2002.

2 Objective evidence

An observation was received from a British Chief Engineer which probably said what was on the minds of many in the industry:

“The implementation of the ISM has been expensive for all companies. The work-load for officers on board has increased considerably due to its implementation (and preparation in our case). When will we be able to see statistics to justify its implementation.

We are now nearly three years since the first phase compliance – where can we find statistics on its impact particularly on British registered vessels. Those of us still trying to achieve implementation / compliance would like to be assured it isn’t just a paperwork exercise.”

This is not an unfair or unreasonable request. Unfortunately, however, it is probably going to be a few years yet before any global or industry wide figure can demonstrate what the Chief Engineer really wants to see.

The Secretary-General of IMO seemed quite confident in his address at the 25th annual World Maritime Day presentation when Mr O’Neil drew attention to the continuing decline in lives and ships lost at sea and to concurrent reductions in maritime pollution. Koji Sekimizu, representing IMO at the IMAREST Conference probably disclosed the source of that claim as Lloyd’s World Casualty Statistics which suggest that in 1995, three ships were lost for every thousand in the world fleet but in 2000, the equivalent figure was 1.9 for every thousand..

Most of us like to see ‘facts and figures’ – we feel comfortable with them and reassured by them. Hard and fast figures provide a firm foundation upon which we can base our knowledge. The actual situation, however – as far as ISM implementation is concerned - appears to be complex and very complicated.

There are at least three obvious places to look for such statistical evidence that might demonstrate whether the ISM Code was working, or at least was starting to have an effect:

1. The marine insurance industry – e.g. Hull and Machinery insurers, the P&I Clubs and cargo insurers. Their records of claims and claim trends should provide an indication.
2. The port State control MOU’s and their secretariats. Their records of inspections and detentions should show whether the number of ISM related deficiencies noted are increasing or decreasing over time.
3. Individual ship operators accident and claims results.

Each of the three possibilities was explored to see if any hard facts could be obtained – unfortunately the conclusion reached was that only the third option offered any potentially useful information at this time. The problem with the first two potential sources is that they represent the ‘big picture’ and we are reduced to averages. ISM implementation does not easily reduce to averages – it is a very specific / individual matter which can only be applied to that particular case. However, even at the individual company level it is not always possible to obtain any meaningful statistics. Captain Eberhard Koch drew attention to the problem within a growing company:

‘...we are very sure that a certain number of accidents and incidents did not occur since implementation of our SMS. We can just not present any figures. It is of no use trying to read tendencies out of our P&I or H&M damage statistics when simultaneously over these years the number and composition of ships under our management has changed...’ (Koch)

Each possibility will be explored in some detail here to describe the problems that presently seem to exist.

2.1 Indications from the marine insurance sectors

Shipowners have traditionally split their main insurance requirement into two parts – each part being covered by very different sectors of the insurance industry. The ship itself, with its machinery and other equipment is usually insured on a Hull and Machinery (H&M) policy drawn up on one of the worlds marine insurance markets – such as the Lloyds Market in London or with insurance companies. There are also a small number of mutual Hull Clubs. The liabilities, on the other hand, tend to be insured with the mutual Protecting and Indemnity Associations – more usually referred to as P&I Clubs. More than 90% of the deep sea Shipowners of the world have their liabilities covered in one of the 13 member Clubs of the International Group of P&I Clubs. The owners of cargo being transported by sea tend to arrange insurance cover on one of the insurance markets or through an insurance company.

Accidents or incidents on board ship, of any significance at all, would almost certainly manifest themselves as insurance claims of one description or another. Consequently it would not be unreasonable to expect that the insurance claims figures could be examined for the period leading up to Phase I implementation and for the period since that implementation deadline of 1st July 1998 to ascertain whether there was any detectable trend developing. Further, if there was a trend then it should be possible to measure the differences. Unfortunately, things were not quite that simple.

A number of marine underwriting organisations and companies were contacted as well as all of the P&I Clubs with a request for statistical data on their claim trends. It became very difficult to obtain meaningful information. The probable reasons for this will be discussed presently.

One thing which was noticeable about the various sectors of the marine insurance industry and their attitude towards the ISM Code, in particular comments on its apparent success or failure, was their almost total silence. The main exception was a series of claims made by the Swedish P&I Club in Göteborg, which have received widespread attention. Indeed the Secretary General of the IMO, Mr William A. O’Neil, as well as many other journalists and industry leaders, have made extensive reference to the Swedish Club findings as confirmation that ISM can work. The author does not doubt the accuracy or the sincerity of the Swedish Club study – however, he believes that some considerable caution is needed when considering the findings.

In a bulletin published by the Swedish Club in December 2001 it describes the research which had been done, which involved a comparison of the claim results (on the hull and machinery side) between 274 Phase I vessels and 319 Phase II vessels – i.e. a total of 593 vessels. The number of commercial trading vessels in the world fleet is estimated at about 47,000 (BIMCO / ISF 2000) - which would suggest that the Swedish Club survey involved approximately 1.3% of the world fleet. The insurers for the other 98.7% of the world fleet presumably were not able to confirm similar results.

The Swedish Club explained its own situation as possibly being attributable to the very high quality of tonnage entered in the Club which was not representative of the cross section of the world fleet. This may well be the case but the Swedish Club, along with all the other P&I Clubs and H&M underwriters applied very substantial general increases to the 'calls' / premiums during the 2001 and 2002 policy years with more increases to come. Wishing no disrespect to the Swedish Club – because of its relative size to the global market and the effect upon its own statistics of just a few more or less major incidents in one year than the next – the results should be viewed with some caution. If the UK P&I Club had made a similar claim then the whole picture might be much more optimistic, purely from a statistical perspective – since the UK Club provides liability insurance to approximately 25% of the world fleet. Since no such claim has been made we will be left to draw our own conclusions out of silence.

However, the work of the Swedish Club does need to be taken seriously and appropriate praise given where due. A review of their methodology and results would therefore be relevant and appropriate here. The Swedish Club provides mutual insurance for both P&I and H&M. The bulletin they published in December 2001 (Swedish Club Highlights) focussed primarily on the results from the H&M claim trends – although they have been monitoring their P&I results. In the leading paragraph they claim:

“A new study carried out by The Swedish Club confirms that shipowners implementing the International Safety Management (ISM) Code can expect to achieve a reduction in Hull claims of 30 per cent together with similar improvement in the incidence of P&I claims.”

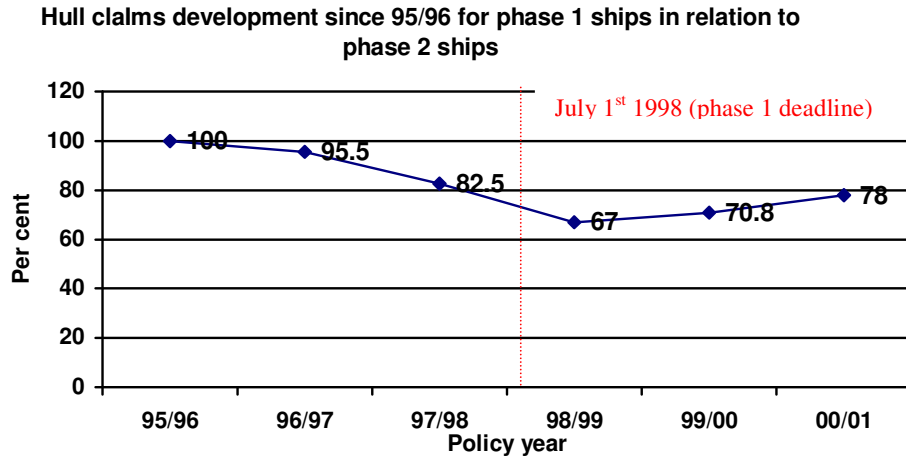
In December 1999 the Swedish Club had issued the findings of a study comparing claims involving Phase I vessels, which had to comply by 1 July 1998 and Phase II vessels that would be working towards compliance by 1 July 2002. Their study reviewed claims trends in the three years to June 30 1999, and noted that the claims development during the period appeared to be 30 per cent better for phase one vessels. The Club had predicted that the gap between the claim trends for the two groups of vessels would narrow as the phase 2 compliance deadline approached. Their actual results would appear to confirm this prediction.

They tabulated the Hull claims development since 1995-96 for Phase I vessels, in relation to phase 2 vessels, as follows:

Phase 1 vessels compared to phase 2 vessels

• 1995 – 96 (base year)	100%
• 1996 – 97	95.5%
• 1997 – 98	85.2%
• 1998 – 99	67%
• 1999 – 00	70.8%
• 2000 – 01	78%

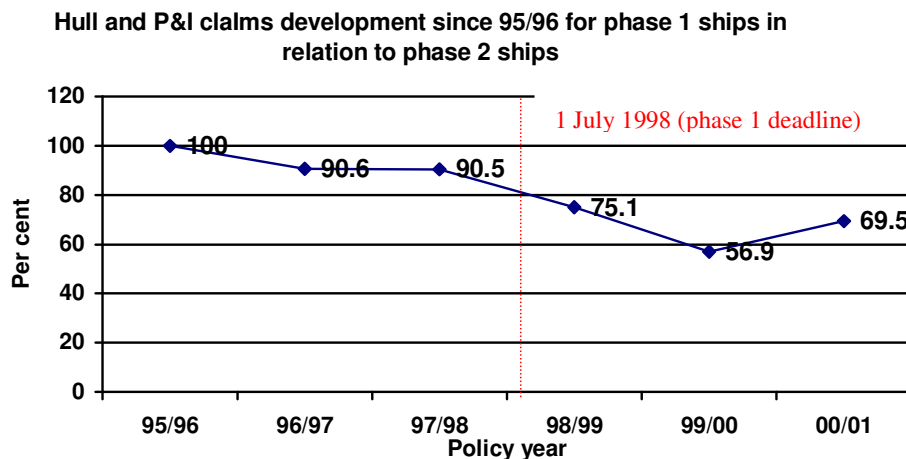
These results can be displayed graphically in the following diagram:



The Swedish Club observed that in the three years to June 30th 1999, a substantial gap opened between the Hull claims incidence rates for Phase I and Phase II vessels. Within 12 months of the 1998 deadline, Phase I Hull claims were running at just 67% of those for Phase II vessels. Interestingly from that point the gap began to narrow – presumably as a result of an increasing proportion of Phase II vessels became involved in the ISM Code implementation process. The suggestion is the lowest point of 67% would indicate an improvement of 33% by Phase I vessels compared with Phase II vessels – if true this would clearly represent significant savings in terms of direct as well as indirect costs of accidents and claims.

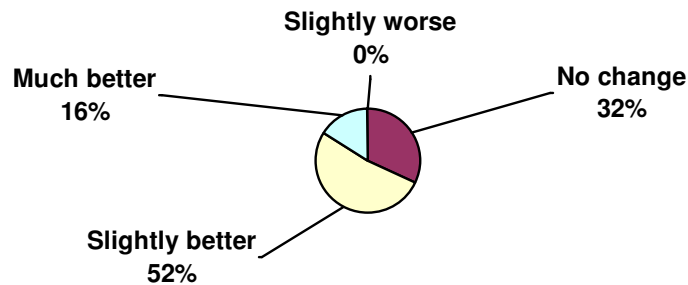
They further predict that the gap will continue to narrow as the phase 2 ships complete their implementation process. Following this to its conclusion the two groups should return to 100% coincidence once ISM is fully implemented in both groups.

At a major international conference held in May 2002 (Hernqvist). Mr Martin Hernqvist, the Swedish Club's Loss Prevention Officer who had carried out the ISM study, presented a further set of figures which included the P&I results:

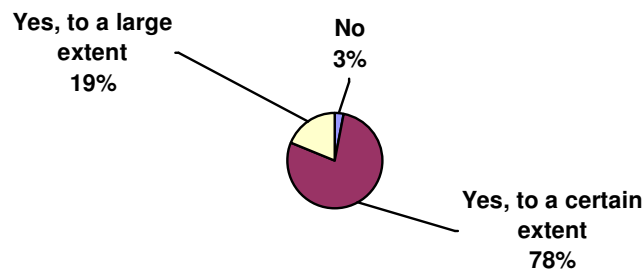


The Swedish Club also conducted a survey of its Membership and although the sample was relatively small – 94 companies replying – it did produce some interesting data. The results can be seen in the following two diagrams:

Can you see a change in the incident rate involving your vessels since the implementation of ISM?



If the incident rate has become better, do you think that has to do with the implementation of ISM?



Three further sets of findings from the Swedish Club survey are also worthy of note:

- The three most important factors for a properly functioning safety management system and improved safety records were:
 1. Commitment from the top management ashore
 2. Increased safety awareness on board
 3. Checklists / procedures for key shipboard operations
- The reasons for a non-functioning safety management system were:
 1. Too much paperwork / documentation
 2. People do not know how they are expected to use the system
 3. People do not believe in ISM
- The top four proposals on how to convert a poorly functioning system into a properly functioning one were:
 1. More ISM training and education
 2. Reduce paperwork / documentation
 3. Provide seafarers with good examples of ISM in practice
 4. Make sure that the accident reporting procedures work and increase feedback from accident reports to the seafarers.

These observations reflect in many ways the authors own results and conclusions. There are a number of problems which the author has with the Swedish Club claims – although, as he says, the author does not doubt the sincerity with which the Club has conducted its research nor the accuracy of the figures used. The original claim by the Swedish Club that improvements of 30% were being noted between the two groups of

ships was made just over one year after the Phase I implementation date. Admittedly, the Club had been monitoring trends from three years previous but even so it would be unusual for a group of independently operating shipping companies to achieve such success with their implementation in such a short period of time. The sample is small and one or two additional major incidents would severely distort the figures.

A factor that cannot be ignored, although admittedly does not in any way disprove the Swedish Clubs claim, is that the Swedish Club received much good publicity with the result of their study being widely reported – why has no-one else made similar claims? The Secretary General of IMO continues to make repeated reference to the study when seeking something to quote to confirm that ISM is working - repeated references are made to it in newspaper and magazine articles and at conferences and seminars – the fact is that it appears to be the only such claim to have been made. Any of the other P&I Clubs would have revelled in such good publicity. Those remaining P&I Clubs still cover more than 90% of the worlds Shipowners – if any one of them could have made a similar claim then they almost certainly would. Their silence perhaps tells its own story.

All the other P&I Clubs were approached as part of this research; many responded and indicated that they would provide details of their claims records – unfortunately, although repeated reminders were sent, only five clubs ended up supplying figures – and then it was on the strict understanding that total confidentiality was to be maintained. However, the author is most grateful to those clubs who did provide statistics – the review of those figures was extremely useful. The review basically confirmed that there was little by way of measurable trends in the claim figures since Phase I implementation in 1998 – although in some instances it might be possible to detect a downward trend in the number of claims but this tended to be accompanied by an upward trend in the value of claims.

Looking for claim trends in this way could also be misleading. Consider, for example, if the Membership of a particular P&I was such that all the companies were already operating good safe ships in advance of ISM and they didn't actually generate many claims at all. In such a situation it may be very difficult to do anything which would nudge the trend downwards – it is more likely to remain steady. The same argument could also apply to individual ship operators.

The reality is that each P&I Club comprises many different ship-operating organisations. Each organisation will be progressing at its own pace with its ISM implementation and, consequently, the result for the whole club is going to be nothing more than the average across its entire Membership. Some shipowners appear to be making good progress with their implementation – many others are taking a little longer. It will take a number of years before 'collective' results can be detected, whether that be across a particular P&I Club, or a Classification Society or a particular Flag.

However, the situation is not as simple as that. The whole of the marine insurance industry appears to have been under-funded in recent years i.e. the premiums being paid are not sufficient to cover the cost of the claims and liabilities which have been incurred. This situation has arisen because of two main reasons – firstly market competition – more underwriting capacity than customers and consequently insurers have been competing for business – even at below break-even prices. Secondly, the insurance sector – like everyone else – has been badly hit by the very poor return on investment income. As a consequence insurance premiums have been increasing significantly in all sectors during the 2001 / 2002 policy years. Almost all the P&I clubs of the International Group of P&I clubs made a general increase of between 25% and 35% - with some clubs also making additional supplementary calls. One of

the leading broking houses – AON report the following rises in other parts of the marine insurance industry (Aon):

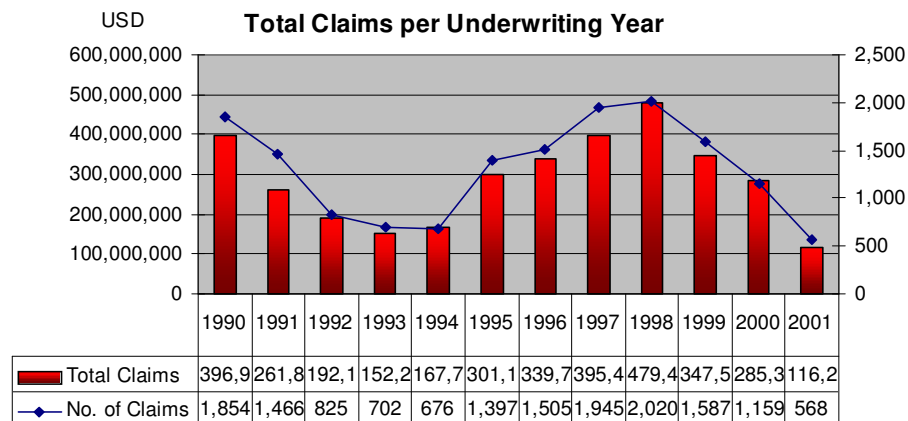
• Blue water hull	15 – 33%
• Brown water hull	15 – 25%
• Brown water P&I	15 – 30%
• Marine liability	7.5 – 20%
• Excess liability	7.5 – 15%
• Brown water pollution	0 – 15%
• Cargo	10 – 20%
• Cargo storage	10 – 30%

Even if an insurer was in a position to follow the Swedish Club claim and make an announcement that they were seeing a reduction in claims which they attribute to successful ISM implementation – it is suggested that they are unlikely to make any such claim in the present market climate since they might have some difficulty explaining to their Members / clients why they then make a further announcement that they require a further increase of 25% on all premiums for the second year running!

It proved equally difficult, initially, to obtain meaningful statistics from the H&M insurers. A few years ago the Joint Hull committee at Lloyds used to produce some excellent casualty statistics but with the retirement of a particular individual those statistics seemed to cease being produced.

Part of the problem is that, unlike the P&I sector, H&M insurance is very fragmented. Indeed the way in which each ship is insured makes statistical data collection from a single reference source very difficult. On each ship there may be 100 or more individual insurers – who may be positioned in different markets. The lead underwriter may take one or two percent and then many others would take smaller ‘lines’. In this way each individual insurer is limiting its exposure and basically spreading the risks covered over a wide portfolio.

However, a very useful source was discovered in Norway – CEFOR (Central Union of Marine Underwriters in Norway) (www.cefor.no) who provide as a service - the Norwegian Marine Insurance Statistics (NoMIS) whose purpose is to compile and process statistical information. As of 31 December 2001 the NoMIS database claimed to comprise 53,167 vessel years and 20,113 claims. Their website contains a detailed statistical report on those incidents, which include international as well as Norwegian business, and covers the period 1990 – 2001. The author is most grateful to CEFOR for their permission to reproduce the following graph which shows total claims per underwriting year for that period:



Source: CEFOR – www.cefor.no

What is very interesting about this particular graph is that it shows very clearly indeed the cyclical nature of marine claims. It would certainly be tempting to draw certain inferences and indeed conclusions from the steady downward trend since Phase I implementation in 1998. It is also tempting to perhaps suggest that these figures could provide a partial explanation for what the Swedish Club had found. Clearly time will tell whether the recent downward trend is just part of the cyclical pattern of marine insurance claims or whether it really is heralding good news.

A number of respondents were quite cynical about the marine insurance industry and seemed to infer that there was some sort of conspiracy taking place. For example an interesting observation was received from a manager of a Greek shipping company who said:

...as far as insurance companies are concerned, ISM has achieved its goals by 100% as they now manage to pay less than what they did in the past...

A similar perception was put forward by an Indian operations manager in a shipping company who said:

At the risk of sounding hopeless, I honestly believe that the one thing that the ISM Code has surely achieved is creating an hitherto absent paper trail that helps pin-point blame when accidents occur, helps insurance companies shy away from paying on claims and aggravate the already stressed out lives of modern day seafarers...

The author received other, similar, reports but did not receive details of any actual or specific incident where insurers had declined to pay claims on account of ISM violations. Presumably the reports were based on personal experiences but clearly run quite contrary to what the ISM Code is about and what it is trying to achieve.

Certainly the marine insurance industry will be delighted if the ISM Code is a success – for that will be beneficial to both the shipping and the insurance industries.

2.2 Indications from port State control MOU's

IMO promulgate general guidance to port State control by resolution A.787(19) but in December 1998 the IMO produced a set of 'Interim Guidelines for Port State Control Related to the ISM Code' by way of circular MSC/Circ.890 / MEPC/Circ.354. In numbered paragraph 3 of those guidelines it is stated:

"...3 Port States should recognize that port State control related to the ISM Code should be an inspection and not an audit. The ISM Code has been developed to promote a safety culture and is not intended to penalise those ships/operators whose Safety Management Systems embrace the principles and requirements of the ISM Code..."

The intention being that port State should confirm that there is a SMS in place and appears to be working.

A Concentrated Inspection Campaign (CIC) was carried out by the Paris MOU, in conjunction with the Tokyo MOU, following Phase One implementation on 1st July, 1998 and the data produced from that CIC remains an important source of data specifically linking a detention to a non-compliance with the ISM Code. The campaign ran from 1 July to 30 September 1998. A further CIC has been conducted following the final deadline for Phase II implementation on 1st July 2002. (at the time of completing this manuscript the data had not been made available).

The first results, of the 1998 CIC, showed that a total of 1575 eligible ships were inspected during the campaign. A uniform questionnaire had been used by PSCO's to test key elements of the ship's safety management system. A total of 81 ships were detained in port for major non-compliance's in their system.

Three ships were banned from the Paris MOU region for not having ISM certificates on board and a safety management system in place. These ships would not be allowed to enter any of the Paris MOU ports until evidence was provided that a certified management system was in place.

Bulk carriers were the largest category of ship found not to comply with 58 being detained out of 722 bulk carriers inspected. Chemical tankers, oil tankers, passenger ships and gas tankers figured to lesser degrees.

Twelve flag states, with more than 10 ISM applicable inspections, showed the following rates of detentions:

Turkey	16.4	St. Vincent & Grenadines	12.1
Russia	10.3	Bahamas	7.4
Cyprus	6.7	Panama	6.5
Philippines	5.6	Liberia	4.8
Malta	4.3	Greece	4.1
Italy	3.3	Norway	1.0

Since the certification for the ISM Code provisions had been carried out to a large extent by Classification Societies on behalf of flag states, the results of the Paris MOU analysis indicated the detention rate by class in relation to a minimum number of 10 ISM applicable inspections as follows:

Bureau Veritas	11.3	Hellenic Register of Shipping	10.5
China Classification Society	9.5	Russian Maritime Register of Shipping	9.4
Lloyds Register of Shipping	9.3	Nippon Kaiji Kyokai	7.4
Polski Rejestr	6.7	American Bureau of Shipping	5.7
Registro Italiano Navale	4.0	Det Norske Veritas	3.4
Germanischer Lloyd	1.2		

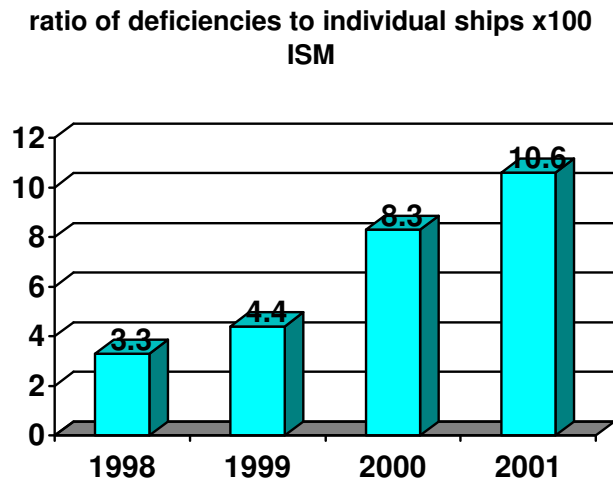
In the inspected areas of the management system on board the Paris MOU analysis found that the most frequent major non-conformities were in respect of the following issues:

- Certificates and particulars not in order 21%
- No certificates on board 17%
- Senior officers not able to identify 'designated person' 16%
- No maintenance routine and records available 12%
- Senior officers not able to identify company responsible for the operation of the ship 9%
- Programmes for drills and exercises to prepare for emergency actions not available 8%

Although the campaign was too soon after the phase one implementation deadline to draw any firm conclusions with regard to the extent of non-compliances – the initial impression provided good support for the strong stance on enforcement by the Paris MOU, and others, to show that it had been effective in driving away non-compliant ships – or at least those ships which had not gone through a certification process. Prior to the 1st July, 1998 deadline there had been predictions that there would be serious congestion of the ports with fleets of banned, non-compliant, ships - but this did not materialise.

The Paris MOU Annual Report for 2001 records that there were 18,681 inspections carried out on 11,658 ships. On ISM it states that there had been '...a steep increase in safety management defects which, over 3 years, have increased by 150%...'

Clearly this is an alarming figure and is depicted in the following graph derived from the Paris MOU 2001 'Blue Book' showing the ratio of deficiencies to individual ships x100:



A regular criticism of the port State control system is its lack of consistency and uniformity in its interpretation of what it is supposed to be doing. Clearly resolution A.787(19) and MSC/Circ.890 / MEPC/Circ.354 were an attempt to address this issue and the Secretariat of the Paris MOU very kindly provided the author with a copy of a document – ‘Port State Control Instructions – PSCC34/2001/01 dated 11 May 2001 – Guidelines for the Port State Control Officer on the ISM Code’. This is an extremely useful document describing how the PSCO should approach an inspection when ISM factors are under consideration. An extract from that document is set out below:

A. Initial inspection

1. During all routine PSC inspections, a check should be made that the ship has ISM certification on board, in accordance with the ISM Code. The PSCO will at the initial inspection examine the copy of the Document of Compliance (DoC) issued for the Company, and the Safety Management Certificate (SMC) issued for the ship. A SMC is not valid unless the operating company holds a valid DoC for that ship type. The PSCO should also check that required audits and endorsements have been made to the certificates.
2. The PSCO should in particular verify that the type of the ship as reflected in the SMC is included in the DoC, and that the Company’s particulars are the same on both the DoC and the SMC.
3. If a vessel has been issued with interim certificates the PSCO should check whether it has been issued in accordance with the provisions of Section 14 of the Code. Though the Safety Management System may not meet the items 4 – 17 listed in Part 2, a documented system should be in place and the PSCO should use his professional judgement in deciding whether a more detailed inspection is necessary.

B. More detailed inspection

A more detailed inspection of the SMS shall be carried out when clear grounds are established. Clear grounds include absent or inaccurate ISM certification or detainable

deficiencies in other areas. Many non-detainable deficiencies may also be evidence of a deficient management system and the PSCO should use his professional judgement in deciding whether these warrant a more detailed inspection. When carrying out a more detailed inspection the PSCO may utilise the following to verify compliance with the ISM Code.

The following questions are not a checklist but contain examples of areas which could be inspected by the PSCO. (Each question has an explanatory note accompanying the guidelines)

Questions:

1. Is the ISM Code applicable to the ship?
2. Is ISM certification on board?
3. Are certificates and particulars in order?
4. Is there a Company safety and environmental protection policy and are the appropriate personnel familiar with it?
Ref.: Section 2.2 of the Code.
5. Is Safety Management documentation (e.g. manual) readily available on board?
Ref.: Section 1.4 of the ISM Code
6. Is relevant documentation on the SMS in a working language or language understood by the ships personnel?
Ref.: Section 6.6 of the ISM Code
7. Can senior officers identify the Company responsible for the operation of the ship and does this correspond with the entity specified on the ISM certificates?
Ref.: Section 3 of the ISM Code
8. Can senior officers identify the 'designated person'?
Ref.: Section 4 of the ISM Code
9. Are procedures in place for establishing and maintaining contact with shore management in an emergency?
Ref.: Section 8.3 of the ISM Code
10. Are programmes for drills and exercises to prepare for emergency actions available on board?
Ref.: Section 8.2 of the ISM Code
11. How have new crew members been made familiar with their duties if they have recently joined the ship and are instructions which are essential prior to sailing available?
Ref.: Section 6.3 of the ISM Code
12. Can the master provide documented proof of his responsibilities and authority, which must include overriding authority?
Ref.: Section 5 of the ISM Code

13. Does the ship have a maintenance routine and are records available?

Ref.: Section 10.2 of the ISM Code

14. Have non-conformities, accidents and hazardous situations been reported to the Company and has timely corrective action been taken by the Company?

Ref.: Section 9.1, 9.2 of the ISM Code

15. Are procedures in place for maintaining the relevant documentation?

Ref.: Section 11 of the ISM Code

16. Are procedures in place for internal audits and have these been carried out?

Ref.: Section 12 of the ISM Code

PSCO's should not normally scrutinise the contents of any non-conformity notes resulting from internal audits.

17. Do detainable deficiencies or many deficiencies, if found, indicate a failure of the Safety Management System?

C. Follow-up action

1. No ISM certification on board

In Annex 1 a flow chart is presented which shows all necessary steps after an initial inspection when the COC and / or SMC are missing.

The chart includes the requirements of the Council Directive 95/21/EC.

2. No valid ISM certificate on board

When the ship's ISM certificates are invalid, e.g., periodic verification has not taken place or discrepancies exist between the DoC and the SMC, the flag State and the Company will be requested to take appropriate rectifying action.

The principles outlined in Section 9 of Annex 1 to the MOU with regard to detention and rectification of deficiencies are applicable.

3. Detainable deficiencies in hardware and / or operational areas

3.1 The normal procedure in accordance with section 9 of Annex 1 to the MOU will be applicable.

3.2 Detainable deficiencies and multiple non detainable deficiencies may indicate a failure of the Safety Management System.

However, the PSCO cannot automatically conclude that the system has failed.

The PSCO should examine the relevant areas of the system to identify non-conformities.

3.3 Non-conformities shall be recorded on the PSC inspection form as indicated in Part 5 (SIRENAC Codes).

The PSCO shall ask the flag State to issue and follow up non-conformity notes. Issuing classification society informed if appropriate.

3.4 Prior to detention being lifted, the Company shall report to the port State Authority which corrective action will be taken regarding the non-conformities which have been reported.

3.5 Non-conformities have to be rectified within 3 months

3.6 Major non-conformities have to be rectified before sailing.

D. Areas which may warrant detention.

The following items may be considered as major non-conformities [foot-note 2] and would make the vessel liable for detention. This list is not considered exhaustive but is intended to give an example of relevant items.

Section of the
ISM Code:

13	ISM certificates not on board
13	Company on the DOC not the same as on the SMC.
1.4	Safety Management documentation not on board
6.6	Relevant safety information not in a working language or a language understood by the crew.
3 + 4	Senior officers unable to identify operator and designated person (ship / shore system breaks down with this).
8.3	No procedures to contact the company in emergency situations.
8.2	Drills have not been carried out according to program.
6.3	New crew members are not familiar with their duties within the SMS.
5	Master's overriding authority not documented and master unaware of his authority.
10.2	No records of maintenance kept or no evidence of maintenance being carried out as indicated in the records.

The reason all this has been set out in detail is because it is important to understand what PSCO's are recording as ISM deficiencies. Certainly all of the above would be considered ISM deficiencies but consider a situation whereby the PSCO identified deficiencies with the 'hardware' – for example, maybe lifeboat davits that had seized, or fire extinguishers that were empty. These are certainly deficiencies under the life saving appliance rules and perhaps other sections of SOLAS and would no doubt be recorded as such in the defect notice. However, they would also clearly point to a seriously defective safety management system – since if the SMS had been functioning then the life saving appliances would never have been allowed to fall into such a state of disrepair. But such deficiencies are unlikely to be recorded as ISM deficiencies. Consequently, in the authors view, the PSC statistics may not necessarily be an accurate indicator of ISM related problems.

There is another concern with regard to the PSC records of ISM deficiencies. It is not at all surprising that the number of recorded ISM deficiencies is increasing with the passage of time, rather than decreasing as we might have hoped or expected. The most likely reason for the increase is not that there actually are more deficiencies – rather, more inspections are taking place on more ships. In addition the PSCO's themselves are becoming much more sophisticated, knowledgeable and skilful in inspecting as

well as auditing and interrogating management systems. Indeed a number of seafarers were almost boasting in their questionnaires as to how they were able to hide problems in the SMS from the PSCO. It can be anticipated that they will continue to develop their sophistication and start identifying an increasing range of ISM deficiencies. Many have already understood the point being made above with regard to defects in the hardware being indicative of problems with the software – i.e. the SMS.

For these reasons the author has doubts about placing too much reliance on the PSC detention figures at this time as being any sort of indicator relating to ISM compliance – although a more detailed access to the actual detention documents might provide the necessary clarification..

2.3 Indications from individual Ship Operators

During the course of his research the author had the privilege of encountering a relatively small number of ship operating companies where the SMS really had become well established and the rewards were coming in. These companies were not the oil majors or the old liner operators – they were relatively modest organisations – quite typically operating a dozen medium sized ships – who had made the 100% commitment to ISM.

Having said that, even old established companies such as A.P. Moller conceded that whilst they considered they had managed safety perfectly well for many years, through ISM implementation they had managed to scrap 25% of their former circulars and circular letters (Gobel)

An example of one of those companies which had achieved major improvements was described in the introductory section above. Further, specific examples may assist to illustrate why these individual companies will provide the most powerful objective evidence possible to confirm that ISM can and does work. Because of the assurance given at the outset the anonymity of the actual companies will be preserved.

Example One

The Company operates a fleet of ten medium sized chemical tankers – average age about seven years, trading worldwide.

The ships are operated from Northern Europe with all Europeans in the office ashore. The entire complement on board, including the Master and Chief Engineer, are Filipino.

In the years leading up to Phase I implementation deadline of 1st July 1998 the company was experiencing an accident / claims problem. More than average numbers and severity of claims were being experienced which were not only affecting the insurance record but also creating a drain on many other resources in the company.

The company decided that they were going to make the necessary commitment to ISM and make the SMS work for the company. They employed a relatively young and very enthusiastic Master to come ashore, assume the role as DP, and set up their systems. From day one he was to work very closely alongside the Chief Executive who was very much in the driving seat as far as the whole project was concerned. The first job was to identify and measure every hole out of which money, and other resources were draining from the company. All the losses – both insured and uninsured losses - were identified and calculated. The calculation indicated that somewhere in the region of \$2,500,000 was being lost, probably unnecessarily, each year. The company objective was set to plug all those drain holes and prevent those funds haemorrhaging out of the company.

The SMS was to be designed to achieve that end. Very specific targets were set – for example – in the first year they were to cut those measurable losses by \$750,000. They not only met their target they exceeded it and reduced their losses by \$1,000,000. In the following year they set their target to reduce the losses by a further \$500,000 – again they exceeded their target. The same has been achieved each year since.

A fairly regular set of officers and crew had been retained by the company but it was decided to find the best and create a special bond between the sea staff, their ship and the company ashore. Special terms of employment were agreed and enhanced social packages were put in place for the seafarers and their families.

A Master and a Chief Engineer were taken out of the fleet to train in ISM auditing techniques. They also assisted the DP in preparing the first draft of the Procedures Manuals. The draft manuals were to go back to the ships for review, comment and amendment. The DP spent much time on board the ships and in the training facility which had been established in Manila.

When the Master and Chief Engineer had completed their detailed ISM auditor training they were then sent back into the fleet as on-board trainers of other crew members. Simultaneously another Master and Chief Engineer were brought ashore for ISM auditor training. When they had completed their training they were put back into the fleet as on board trainers – the original Master and Chief were then reappointed into their command positions. And so it went on until almost all Masters and Chiefs had completed their training. As a direct consequence of this training the Masters and Chiefs were able to provide high quality on board training for other officers and crew in ISM related issues – including the development of a ‘no-blame’ and ‘safety’ cultures. As far as possible the same set of seafarers stayed with the same ship and a sense of ownership and belonging was developed. This also applied to the SMS on board each ship – the SMS belonged to the team on board that ship; they had been involved in preparing the procedures, they were the ones not only making it work but making it work successfully. The Master and his officers and crew on board conducted their own internal audits and had control of their non-conformity procedures.

Although the levels of accidents was on its way down the ship staff started reporting a wide range of hazardous occurrences and near misses – each one was actioned and feedback provided. The seafarer making the report was publicly praised and thanked for his contribution. A very clear pyramid / triangle shape exists with the different categories of incidents being reported.

The company has not only achieved, and bettered, the targets for financial savings it had set itself – its accidents and claims have reduced to almost zero. It has a crew retention rate of almost 100% with a list of seafarers submitting applications to join the company as soon as there is a vacancy. The company has now been placed on a ‘Preferred Company Status’ rating with the oil majors such that they will be given first options on the most lucrative charters that may be coming available.

Example two

A very different company – this inter-island ferry operator runs a relatively small fleet of ropax rail ferries and a new 98 m INCAT High Speed Catamaran which carries passengers, passenger vehicles and commercial vehicles.

According to the Nautical Manager / DPA the service takes place across one of the most turbulent bits of water in the world. There are strong tides and winds. The ships operate in pilotage waters for half the voyage of 52 nautical miles. The pilotage waters are constrained and the Masters all have pilotage exemptions for both ports.

Last year they carried:

1.04 million passengers
400,000 lane meters of commercial vehicles
238,000 passenger vehicles
1.3 million lane meters of rail wagons

The ships, except the high speed ferry, operate around the clock, operating three return crossings per day. Crossing time is 3 hours with a one hour turnaround.

The shore side of the operation comprises:
General Manager
Nautical Manager
Technical Manager
On Board Services Manager
Plus a support staff of six.

This is a relatively small shore management for such an operation but the DP explained that this is possible because day to day running and maintenance is delegated to Masters and Chief Engineers who work to a budget to which they have had the major input.

The DP is an ex deep sea Master and, from time to time, he takes command of one of the ships at random - "...to keep in touch with the realities of life in our ships..." He explained that he finds that experience invaluable. The feedback he receives, particularly from Masters and Chief Engineers, is that they appreciate him doing this - because when they are reporting problems they feel they are talking to someone who has "been there".

The DP explained that he pulled together a team that included himself and a Master, Chief Engineer and Onboard Services Manager from the fleet. That team then produced the first draft of their SMS.

The process they used to write their SMS was to draft a chapter and then sail on the ships and discuss it with those on board. After feed back the team would make any changes that were appropriate and necessary. The DP explained:

The SMS has now been functioning for nearly three years. It would be untrue to say that it has universal acceptance. But we are getting there. It takes time and constant "pushing". We have had and dealt with over 400 document change forms. Over 95% of these have been valid and sensible suggestions from a wide range of personnel.

All the hard work seemed to be paying off – the DP proudly advised that not only he but also many of the seagoing staff believe that ISM has provided a wonderful tool to improve safety. He believes that the ships are at last getting the idea that the system deals with problems and that corrective action IS taken.

Details received from other companies were perhaps a little briefer but still of interest – such as the comments of an Indian manager in a ship operating company:

...As far as our company is concerned, we have gone a long way towards the effective implementation of ISM Code... I feel that compared to past

, presently our operations are more organised. Our operating cost has reduced; there are practically no time loss accidents and there is more healthy atmosphere to work on both board and ashore...

A similar experience was reported by a Swiss manager:

...already prior implementation of ISM aboard our vessels, the safety culture was an important matter, it is true that after ISM implementation, accident aboard have been greatly reduced, maintenance boosted up and mechanical damage to property improved... I definitely confirm that this system aboard our vessels is working but need continuous control...

The level of achievement and improvement which might be possible is clearly going to vary enormously from company to company and from ship to ship. It all depends where the starting point might be. Those who will have most to gain from a properly implemented SMS will be the companies who were previously operating at a relatively low level of safety management. However, even those companies who believed they were already managing safety at a high level have found that a whole range of improvements have been possible – which raises their own level of safety even higher. An operations manager in a shipping company shared his reflections on this very issue:

ISM has different meaning for different people. We use ISM in an enhanced form to manage our entire operation, i.e. it is the way we work and relates to all aspects of operations not only safety & the protection of the environment. For us it is successful. Many companies, however, require only the certification and do not actively use their SMS to enhance their management. This attitude will change with time and therefore in the longer view the ISM Code will contribute to a better managed and more professional ship management industry. Many operate at a higher level already but ISM will drag the base level higher. In summary we are better off with ISM than without it.

There were companies who were clearly trying to move forward but were encountering obstacles such as reported by the following ship manager:

...after 5 years of ISM I feel our system is growing top heavy, mainly due to complying with requests from auditors – we are about to conduct a major review to stop the tail wagging the dog...

It is very important to always remember that the SMS is intended to be a dynamic process which is constantly evolving. It should be ready and capable of change should change be needed to improve the efficiency of the system.

Others reported situations that were not so encouraging and in some cases reflected almost a sense of hopelessness – such as this Cypriot ship operator:

...unfortunately it has created a heavy burden of paperwork to all people ashore and the Captains aboard the vessels (specially the small ships with limited crew) without significant change to the safety and environmental protection...

It would appear that many ship operators and seafarers have found themselves in very similar dilemmas. Often the conclusion reached is that the ISM Code is flawed and that all the paperwork and inefficiencies associated with it are the fault of the Code. As has been explained elsewhere, the Code does not call for vast amounts of paperwork to be generated. These problems are often associated with a poorly structured and badly implemented SMS – particularly those which are completely alien to the particular company which had been bought off the shelf. Ship operators and seafarers who are facing such problems should take a long hard look at their SMS – if they still conclude that the SMS they have is a good and efficient system but still the staff they have cannot adequately manage the system then they probably do have a serious manning problem. That problem is probably acute and in need of urgent corrective action before it leads to a serious accident. The response may well be that the ship operator believes that he cannot afford to employ any more staff. The author sympathises with that dilemma but would suggest that the cost will be very small compared with the alternative. In this regard the case studies in Chapter 7 should be read carefully – particularly the Eurasian Dream. In addition to losing the right to rely on any of the Hague Visby defences on account of having an ineffective SMS, ship operators may find that insurers start using similar tests and refuse to pay claims in appropriate cases.

3 Participants in the Survey

This chapter will examine who was approached and invited to participate in the survey and who did actually participate. It will attempt to describe a profile of the respondents – which will show that they represent a very wide cross section of the international shipping and related industries and professions.

As was explained in the introductory chapter the questionnaires were designed to include three categories of participants:

- i) Masters and other seafarers (blue)
- ii) Ship operators (green)
- iii) Other stakeholders (red)

We will consider each group in turn but in the later chapters of this book we will compare and contrast the responses from the different category groups. Specific details of individuals, ships or companies were not asked for and, although in some cases these details were given, it was decided to maintain total anonymity throughout the survey. The general view was that personal details such as names were not a significant factor in the investigation. However, it is conceded that it would have been useful to compare and contrast the views of the sea staff and the shore staff in the same company. This was possible in a few instances. In general terms, as will be seen, there do appear to be quite significant differences of perceptions regarding ISM implementation between those working ashore compared with those on board ship. However, it will also become apparent that there are significant differences of perception between different individual experiences.

3.1 Masters and Seafarers

Completed questionnaires from Masters and other seafarers started arriving very soon after the initial distribution with ‘Seaways’ and the NUMAST ‘Telegraph’ in April 2001. Perhaps not unexpectedly, the majority of those early responses were from British Masters and senior officers either shore based or involved in the short sea trades or offshore supply boats. Alarm bells started to ring when those responses were reviewed since many were suggesting quite a negative attitude towards ISM with few words of support. Indeed as the second wave of responses started to arrive from Australia, New Zealand, Canada and the USA a similar general pattern seemed to be developing – although a few individuals were starting to surface who were showing a much more positive attitude.

Eventually more and more completed questionnaires were being returned from Indian, Filipino, Eastern European Masters and officers and a much better balance of opinions was starting to take shape.

As had been expected most responses from seafarers were being received as completed paper copies of the questionnaire, although a significant number did complete the questionnaire ‘on line’ and did leave some most valuable and interesting comments and observations on the discussion page of the Website.

A number of Shipowners were very supportive of the project and agreed to encourage the active participation of their seafarers. Typically a supply of questionnaires would be sent to the Master of each ship in the fleet with a request that the Master encourage everyone on board to complete the questionnaire. On a number of occasions the Master was specifically asked to encourage everyone to be frank and honest and to send the completed questionnaires direct to the author. The intention of course was to

reduce to a minimum the risk that the individual seafarers might be concerned that there would be 'repercussions' if they gave the 'wrong' answers and if they were seen by the management ashore. Other companies did not make such suggestions and the questionnaires were returned via the ship operator's office - although it was emphasised to the Master that each officer and crew member should complete the questionnaire independently. A review of all questionnaires coming from the same ship did hold additional interest. On a number of occasions the perceptions of the seafarers were remarkably close to each other. Whether this reflected some level of 'cooperation' between everyone on board in completing the questionnaire or otherwise genuinely reflected the way in which ISM was working on board that particular ship was difficult to judge. The participation though of those ships, and in particular the support from the Company ashore and the Master on board, was very much appreciated.

Further bundles of questionnaires started to be returned from Nautical Colleges and other training academies around the world providing a most useful input from seafarers of nations who were perhaps outside of the initial distribution group.

It was not always easy to determine, but on occasions it was very clear that completed questionnaires were being received from seafarers through the Mission to Seafarers in various parts of the world.

Nearly 2000 completed questionnaires were received from Seafarers from at least 54 different nations. Not unexpectedly the majority of responses were from the Masters and senior officers, although a significant number were received from junior officers and ratings. Many of those responses from junior officers and ratings contained extremely valuable comments and useful observations.

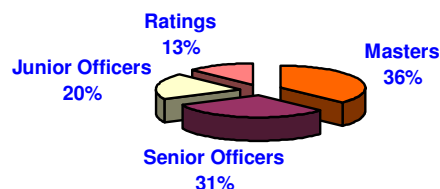
3.1.1 Position on board – Masters and Seafarers

The options of categories of seafarers provided were based on a very traditional style manning arrangement and proved adequate for the vast majority, but not all, respondents.

For statistical purposes the categories were grouped together as follows:

- Masters
- Senior Officers – Chief Engineer, Chief Mate, Second Engineer
- Junior Officers – Second Mate, Third Engineer, Third Mate, Junior Engineer, Other Officer
- Ratings – Petty Officer, Senior Rating, Junior Rating.

Seafarers who responded to ISM Survey



Initially the responses were mainly from Masters – although a significant number of completed questionnaires were appearing from Chief Engineers. Even by July 2001 when a preliminary analysis of the figures was undertaken, almost exactly 50% of the seafarers respondents were Masters and the majority of them were from OECD countries. However, as time went on, more and more of the completed questionnaires being returned were from other ranks and other nationalities.

Whilst the number of Masters – representing 36% of seafarer respondents and Senior Officers at 31% are perhaps disproportionate to their actual numbers in relation to other seafarers on board, it is perfectly understandable that these ranks in command and responsible for the on-board implementation of the SMS were the ones most prompted to complete the questionnaire.

What was very encouraging was the significant contribution from more junior officers and ratings. It is certainly correct to state that the SMS directly involves everyone on board – rarely though has the author seen or heard any views expressed by these categories of seafarers on ISM implementation prior to this survey.

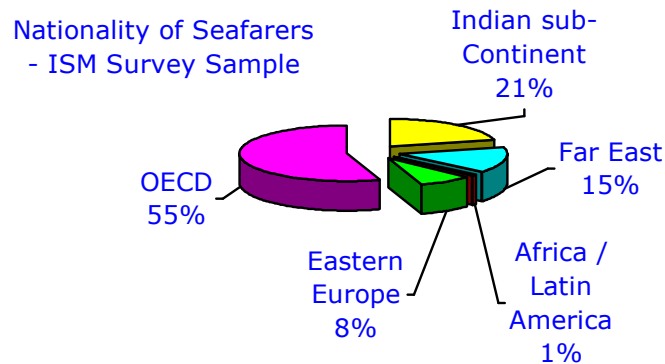
The ability to identify the different ranks on board has allowed a comparison to be made of the perceptions of the ISM Code and the working SMS between those categories of seafarers. It was also possible to analyse and compare their responses by national groups.

3.1.2 Nationality of Masters and seafarers

When the questionnaire was first drafted it was considered a point of interest to include a request for the respondent to declare their nationality for two main reasons: Firstly, to help complete the profile of the individual seafarer, and secondly, to try and make an assessment with regard to ensuring that a good and fair representative sample of seafarers had participated in the survey. The real significance of including this piece of information was not to become fully apparent until well into the survey when one of the biggest surprises of the exercise was to manifest itself. This will be discussed in Chapter 6 .

Responses were received from nearly 2000 seafarers from many different nationalities as shown in the following table:

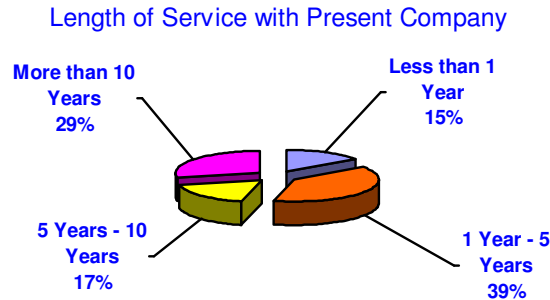
Algerian	Ghanaian	Polish
Australian	Greek	Portuguese
Bahamas	Icelandic	Romanian
Bangladeshi	Indian	Russian
Belgian	Irish	South African
Brazilian	Italian	Spanish
British	Jamaican	Swedish
Bulgarian	Korean	Swiss
Canadian	Kuribatan	Syrian
Chinese	Latvian	Taiwan
Croatian	Lithuanian	Tanzanian
Danish	Malaysian	Thai
Dutch	Maldivian	Turkish
Ethiopian	Maltese	Ukrainian
Filipino	Myanmar	USA
Finish	New Zealand	Yugoslavian
French	Norwegian	
Georgian	Pakistani	
German	Panamanian	



3.1.3 Length of service with ship operator – Masters and seafarers

Up until the monumental changes which took place in the shipping industry during the late 1970's and 1980's - when ships from the traditional maritime nations were 'flagged out' in considerable numbers and many of the seafarers from those nations were replaced by personnel from countries where labour prices were lower – it was quite common, particularly for officers, to not only enjoy long term company contracts of employment but also remain very loyal to 'their Company' – often spending their entire career at sea with the same Company. That loyalty, and consequent bond, between the employee and employer was very strong and tended to engender considerable professional pride that, in turn, contributed to a positive attitude towards the safe and efficient running of the ship. With the breaking of those bonds there were inevitable consequences as was evidenced by the enormous rise in accidents and claims that occurred during the middle to late 1980's.

It was therefore considered appropriate to try and establish through the questionnaire whether there might be any correlation between the length of service of the individual seafarer with a particular Company and their attitude towards the ISM Code and the working of the SMS. Interestingly a significant number of the Seafarers who responded were long serving staff with the same Company.



Interestingly the seafarer respondents were almost equally split between what can perhaps be considered short to medium term employed - with the same company for up to five years and what can be considered long term – above five years. The author must express a pleasant surprise to find that 29% of respondents had been in the employment of the same company for more than 10 years.

A relevant comment was received from the Chief Executive of a Scandinavian shipping company who said:

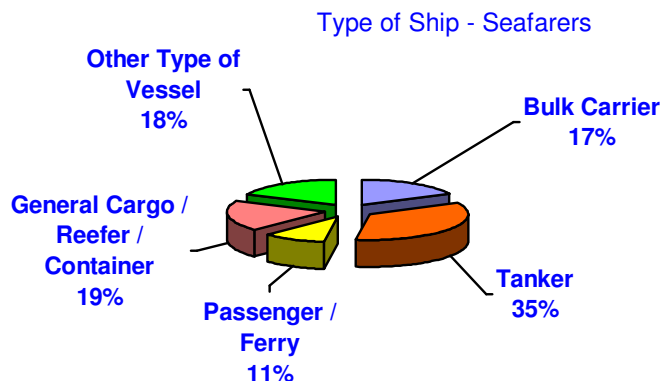
...Crew from manning agents not always taking company goals and objectives to their heart because they will be gone after a few trips. Lack of ownership because short employment. Others with long term employment recognise however the importance of a functional SMS because it makes their job easier by providing routines and the basis to train newcomers...

It became apparent that a key factor which was always present in those companies where ISM had been successfully implemented was continuity of employment – particularly of the seagoing staff.

3.1.4 Type of ship – Masters and seafarers

It was considered important to establish through the survey what type of vessels the individual Seafarers were serving. Phase One of the ISM Code implementation, which had the final deadline of 1st July, 1998 for compliance, involved all passenger ships including passenger high speed craft, oil tankers, chemical tankers, gas carriers, bulk carriers and cargo high-speed craft of 500 gross tonnage and upwards. The deadline for phase two implementation was set for 1st July, 2002 when all other cargo ships and mobile offshore drilling units of 500 gross tonnage and upwards must comply.

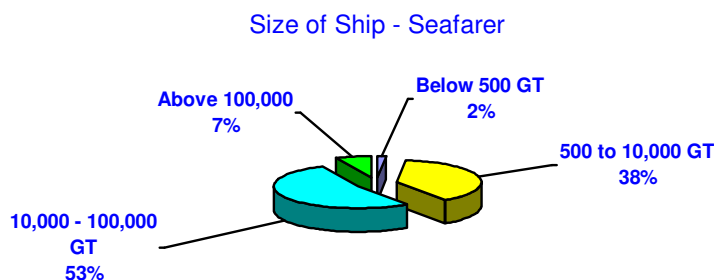
The survey took place during 2001 which would provide an opportunity of looking at the experiences from phase one ships and hearing views from those preparing for phase two implementation. In addition to establishing the type of vessel on which the seafarer was serving the survey also established whether the vessel held a Safety Management Certificate (SMC). It became apparent that many phase two ships falling into the category of 'other cargo ships' – particularly container ships, refrigerated cargo ships and offshore supply boats had gone through the verification and certification process well ahead of the 1st July, 2002 compliance deadline.



Initially there was a disproportionate amount of responses from ships that fell into the category of 'Other Types of Vessel' comprising, primarily, naval support type craft, survey vessels and off-shore supply type vessels. This was probably because those seafarers were to first to receive their questionnaires. Eventually, a much more balanced profile of the typical ships at sea was achieved providing the potential for a good representative sample of views and opinions to be obtained.

3.1.5 Size of ship – Masters and seafarers

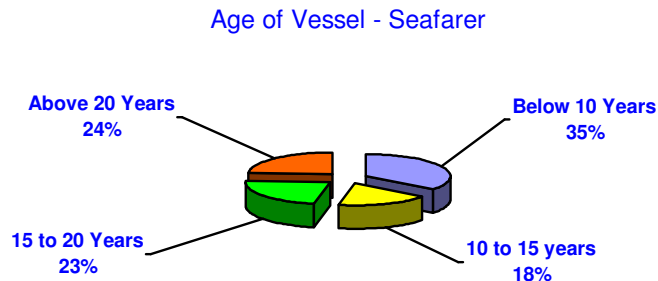
In order to extend and elaborate upon the general profile of the vessels upon which the sample of seafarers were serving the questionnaire also allowed size and age of ship to be considered.



These results complement the results showing the types of ships – suggesting that the sample of seafarer respondents were serving onboard many different types and sizes of vessels – and thus providing the propensity for a good cross section of views being considered.

3.1.6 Age of ship – Masters and seafarers

To complete the profile of the ships on which the sample of seafarer participants were serving, the questionnaire asked about the age of the vessels.



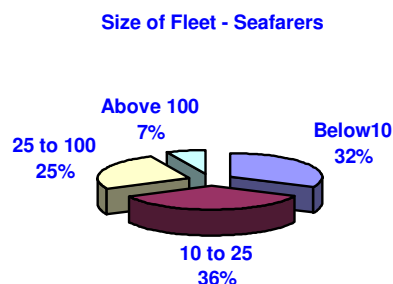
The profile of the ships according to age was fairly well balanced either side of the 15 year mark. Because the SMS is primarily concerned with the human element and management side of the ship operation, an analysis of the significance of age of vessel on frequency of accidents / claims has not been undertaken in this study.

3.1.7 Size of fleet – Masters and seafarers

It was felt important to try and ensure that responses were being received from staff of shipping companies of different sizes. Whilst there are still a few large fleets in private hands – most large fleets would probably fall into three broad categories:

- oil majors / liner operators
- large third party shipmanagement companies
- national state fleets

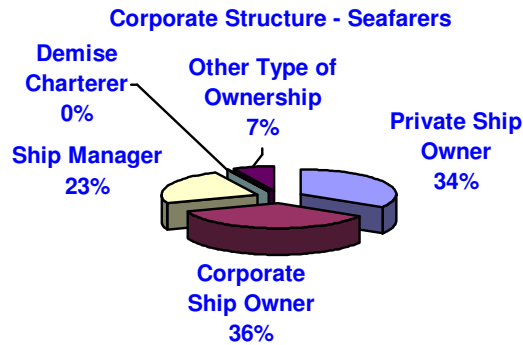
These categories of ship operator were probably much more likely to have developed and implemented formalised safety management systems well ahead of any ISM requirements.



Interestingly, there were only about a third of the seafarers respondents who probably fell into this category. The other two thirds seemed to be sailing with the small to medium sized companies. This would indicate that the cross section of the sample was from a good variety of types of company background.

3.1.8 Corporate structure – Masters and seafarers

The conclusions reached based on the size of the company were reasonably well supported when the corporate structure itself was examined.

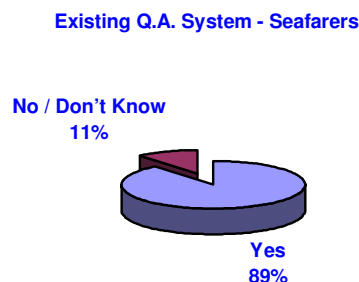


The seafarers in the 'other type' of ownership category would appear to be working primarily for national Government agencies – either in naval support type vessels or national fleets.

3.1.9 Management system background – Masters and seafarers

During the 1970's and increasingly so into the 1980's most of the oil majors started to implement quality management type systems. A number of the large ship management companies were not far behind – particularly those who were members of ISMA (International Ship Managers Association). These were all voluntary, or at least were not mandatory schemes and were often verified against ISO (International Standards Organisation) QA standards.

As part of their own QA standards it was often a requirement that any 'supplier' or 'subcontractor' would also need to be QA accredited. Accordingly, as time went on more and more ship-owners realised that if they were going to continue to tender for charters from these operators then they would have to go down the QA road. The author would have to express surprise though at the very high proportion of respondents who claimed to have had a formalised QA system ahead of ISM.



The most probable explanation is that many of the particular ship operating companies developed a QA system alongside their ISM systems during the run up to Phase I implementation. One of the implications of this though is that the individuals working within those companies should already have been well familiar with formalised, documented, management systems as well as such things as non-conformity reporting. The indications from other parts of the survey would suggest that this might not be the case.

3.1.10 Flag of vessel – Masters and seafarers

Many of the criticisms levelled at the decline in standards within the shipping industry start with the concept of ‘flags of convenience’ (FOC’s) or perhaps ‘open registers’. Certainly seafarers organisations – in particular the International Transport Workers Federation (ITF) – have long waged a campaign against the very idea of FOC’s alleging that they have allowed seafarers living, working and remuneration standards to be eroded. This also extends to the safety standards. A detailed Inquiry into many related issues was conducted by the International Commission on Shipping – under the Chairmanship of the Hon. Peter Morris. (Morris)

Much valuable work has been done by organisations such as the Seafarers International Research Centre based at Cardiff University in an attempt to quantify the extent to which such claims may be valid. It would probably be fair to say that there most certainly are instances where particular FOC’s have lived up to the reputation painted of them by the ITF. However, it should also be stated that some FOC’s / Open Registries conduct their activities to very high professional standards.

Within the context of this survey it was considered appropriate to try and establish whether the seafarers were working on board ships flying their own National flag or a FOC and if so whether there was any apparent connection between that fact and their attitude towards ISM.

An analysis of the Flags showed a variety almost as extensive as the nationality of the seafarers themselves as the list below shows:

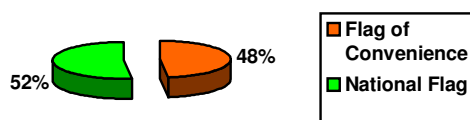
- | | | |
|-----------------------|-------------------|-----------------------------|
| ➤ Algerian | ➤ French | ➤ Netherlands Antilles |
| ➤ Antigua and Barbuda | ➤ German | ➤ New Zealand |
| ➤ Australian | ➤ Gibraltar | ➤ Norwegian |
| ➤ Austrian | ➤ Greek | ➤ Panamanian |
| ➤ Bahamian | ➤ Hong Kong | ➤ Papua New Guinea |
| ➤ Barbadian | ➤ Indian | ➤ Philippines |
| ➤ Belgian | ➤ Indonesian | ➤ Portuguese |
| ➤ Belize | ➤ Iranian | ➤ Qatar |
| ➤ Brazilian | ➤ Irish | ➤ Russian |
| ➤ British | ➤ Isle of Man | ➤ Saudi Arabia |
| ➤ Brunei | ➤ Israeli | ➤ Singaporean |
| ➤ Cambodian | ➤ Italian | ➤ South African |
| ➤ Canadian | ➤ Jamaican | ➤ St Vincent and Grenadines |
| ➤ Cayman Islands | ➤ Japanese | ➤ Swedish |
| ➤ Chinese | ➤ Jordanian | ➤ Swiss |
| ➤ Cypriot | ➤ Kuwait | ➤ Thailand |
| ➤ Danish | ➤ Liberian | ➤ Turkish |
| ➤ Dutch / Netherlands | ➤ Luxemburg | ➤ Ukrainian |
| ➤ Ethiopian | ➤ Malaysian | ➤ United Arab Emirates |
| ➤ Falkland Islands | ➤ Maltese | ➤ United States |
| ➤ Fijian | ➤ Marshal Islands | ➤ Vanuatu |
| ➤ Finish | ➤ Moroccan | |
| | ➤ Myanmar | |

It is not always easy to be accurate in identifying when a flag is a national flag or a FOC. For the purpose of the analysis undertaken here it was decided to accept the list of the ITF which identifies 30 countries as having so-called ‘flags of convenience’:

Antigua and Barbuda	Cook Islands	Marshal Islands
Aruba	Cyprus	Mauritius
Bahamas	Equatorial Guinea	Netherlands
Barbados	German	Antilles
Belize	International Ship Register	Panama
Bermuda	Gibraltar	St Vincent
Bolivia	Honduras	Sao Tome & Principe
Burma	Lebanon	Sri Lanka
Cambodia	Liberia	Tuvalu
Canary Islands	Luxembourg	Vanuatu
Cayman Islands	Malta	

Using the ITF list of so called ‘flags of convenience’ FOC’s – a comparison can be made of the respondents who were sailing on National flag vessels and FOC’s:

The split by Flag



This is probably not far away from the true profile of the international fleet – although the survey sample would indicate a slight bias towards the National flag. This was probably as a result of a relatively large participation by British seafarers sailing onboard UK registered ships.

3.2 Ship Operators

Within this category the survey was really looking to identify ship owners and ship managers rather than chartering organisations. It was looking for the company who had actually set up and was operating the SMS – within the context of ISM that meant the Company with the big ‘C’.

Attempts to reach this category of potential respondent was threefold:

- i) Direct mail – both by post and by e-mail
- ii) Through national Shipowners Associations
- iii) Through specially targeted editorial in shipping magazines, newspapers and journals

There are so many individual ship operating companies around the world that available resources would not allow a wholesale direct mailing approach. However, it was possible to identify about a hundred ship owning and ship management companies with a significant number of ship units in their operation and limit the direct mailing to those companies. There were also a number of companies with whom the author had already established contact and had an existing dialogue.

In many maritime countries with a ship owning industry – the industry has formed Trade Associations or Chambers of Shipping to provide a voice for itself and generally promote the industry as a whole. Most shipowners of any significance would be members of their national Association. Most of these national shipowners associations are themselves members of the International Chamber of Shipping and / or the International Shipping Federation. It was therefore possible to rationalise the mailing a little by sending a letter to the secretariat of each individual Association or Chamber, along with a supply of questionnaires, to ask for their help in distributing the questionnaires to their members and encouraging participation.

There are also other, more specialised, ship operator organisations who were also potential sources of help with contacting ship operating companies. The largest is perhaps BIMCO – the Baltic and International Maritime Conference – based in Copenhagen. The main work of BIMCO is in drafting and regulating a whole range of standard shipping contracts such as charterparties, bills of lading and similar. BIMCO had already been proactive in providing training and familiarisation with the ISM Code and had also conducted a limited survey of its own members. BIMCO were extremely helpful with the research including feature articles in their own Newsletter to their members about the project, encouraging them to participate, as well as a direct link from the front page of their own website to the authors own ISM website.

Intercargo is an organisation of ‘dry’ cargo ship operators - they also offered a lot of help and support and were to become directly involved at a later stage with the production of the ‘Seafarers Guide to ISM’ that will be discussed later in Chapter 8.

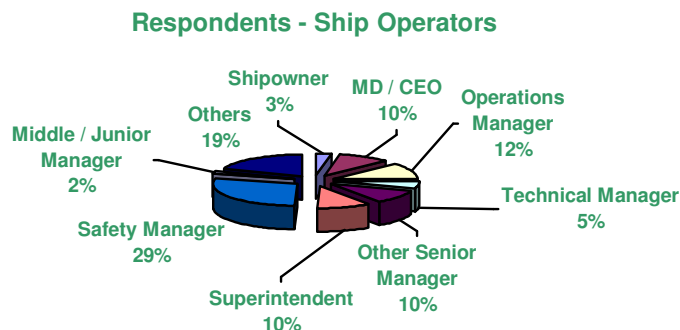
Most ship operating companies around the world would subscribe to one or more of the leading shipping newspapers and / or magazines – specifically Lloyds List and Tradewinds as far as Newspapers are concerned and Fairplay, Lloyds Ship Manager and Seatrade as far as magazines / periodicals are concerned. By providing the editors / journalists with an interesting and maybe a little provocative or controversial interview or article the author could almost guarantee prominent editorial coverage which would reach the attention of the ship operators around the world. With the co-operation of the editors and journalists it was also possible to include a personal request to ship operators to participate in the survey and provide them with the relevant contact details – including the Website address. Lloyds List in particular were most kind and went one step further by displaying a scrolling banner on the front of their own website asking their readers to participate in the survey and provided a link direct to the ISM website.

Through these various sources it was possible to reach a very significant proportion of the ship operators of the world.

3.2.1 Position in the company – Ship Operators

Within any ship operating company almost everyone will have some level of involvement with the ISM system – although some will be clearly much more involved than others. The level of involvement for individual positions within shipping companies may vary considerably between companies. This may be because of the way a particular company has established its systems but, probably, will be more directly dictated by the size of the company. For example in a very large oil major or liner operator there may be a number of individuals who devote their entire time to overseeing the SMS in their capacity as Designated Person (DP). In a more modestly sized company the Operations Manager may also double up as the safety manager and also deal with the insurance and claims matters. They may also be expected to fulfil the role of the DP.

It was hoped that a good cross section of views could be obtained from different groups of people with a variety of ship operating organisations and this seems to have been achieved.

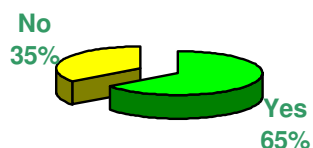


It is made very clear in the Preamble to the ISM Code, paragraph 6, that 'the cornerstone of good safety management is commitment from the top' – it was perhaps a little disappointing therefore that there were not more responses directly from the Shipowners / MD's / CEO's. Having said that, the author was in direct contact with a number of individuals at that very senior level and it did become very apparent that the cornerstone prophesy of the architects of the Code was fully borne out.

It was also of relevance, perhaps, that the individuals most interested in participating in a survey such as this would be the DP's. The ISM Code does not itself set out who exactly within the company should undertake the role as DP – only that such a person should have direct access to the highest levels of management. In an ideal situation the DP should be independent of a line management function but should have sufficient seniority to ensure that he / she can properly fulfil the role of DP. This would include ensuring that the SMS is functioning properly and that all safety aspects are being adequately resourced and supported.

An analysis of the responses would indicate that two thirds of those submitting responses on behalf of the ship operator categories were DP's.

Designated Person



What is not clear though is whether, or to what extent, the DP doubles up in some other capacity within the ship operating company.

3.2.2 Nationality of respondent

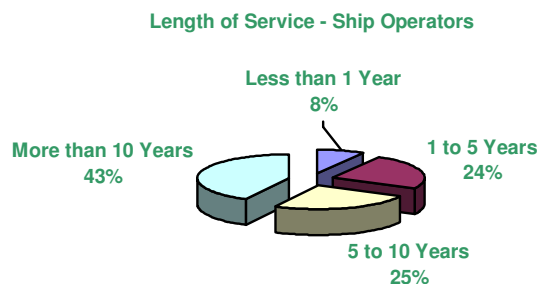
Not every respondent declared their nationality – although those who declined represented less than 10%. The nationalities represented in the sample included:

Australian	Greek	Pakistani
Bangladeshi	Hong Kong	Peruvian
Belgian	Icelandic	Polish
Brazilian	Indian	Portuguese
British	Indonesian	Romanian
Bulgarian	Iranian	Russian
Canadian	Israeli	Singaporean
Croatian	Italian	South African
Cypriot	Jordanian	Spanish
Danish	Korean	Swedish
Dutch	Mauritius	Swiss
Filipino	Mexican	Turkish
Finnish	Moroccan	Ukrainian
French	New Zealander	United States
German	Norwegian	

It is important to recognise that the question asked for the nationality of the individual. Whilst many of the individuals were working inside their own native countries there were many more who had taken their expertise and were part of an ‘ex-pat’ type labour force. In this regard compare the above list with that displayed in 3.2.11 below.

3.2.3 Length of service with company – Ship Operator

Compared with the sea staff, shore based respondents tended to have been in the employment of the same ship operator for a much longer period of time. Indeed 43% claimed to have been employed by the same company for more than 10 years and another 25% for more than 5 years.

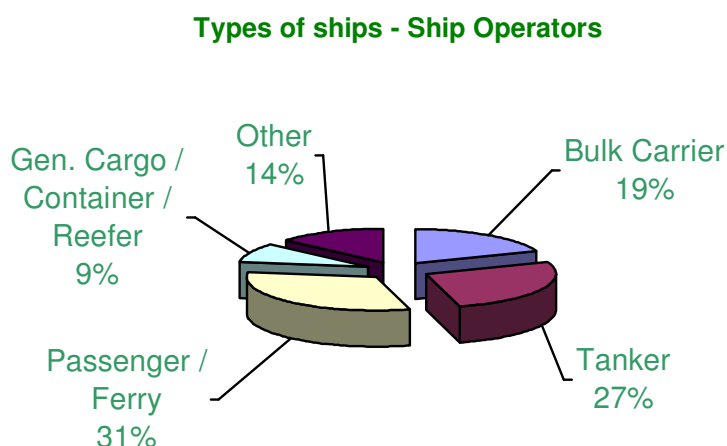


What is not clear from the responses is how much of that time was actually spent in employment ashore and how much might have been spent working in the same company but at sea. It has been a tradition for very many years for ex-seafarers to be employed within the industry ashore and, where possible, many companies have preferred to recruit from within their own staff.

To some extent the issue is not necessarily relevant since the purpose of the question was to establish to what extent continuity of employment might be a factor in the attitude towards ISM and in the successful implementation of an SMS.

3.2.4 Type of ships – Ship Operator

In addition to asking which type of ship was operated - the questionnaire also asked the respondent to indicate the number of each type of ship operated by that company. The graph below is based on the percentage of the total number of ships identified.

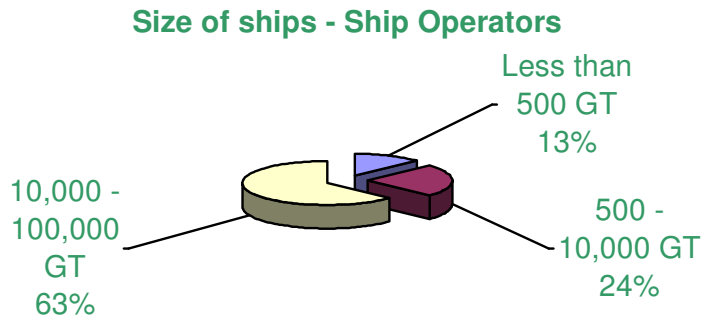


We see a good cross section of ship types. Not surprisingly the majority are Phase I ships – Passenger, tankers and bulk carriers. There was also a not insignificant number of Phase II ships – although many of those appear to have achieved verification and certification early.

3.2.5 Size of ships – Ship Operator

The ship sizes were broken down into four broad categories – small ships, below 500 GT, medium size ships between 500 and 10,000 GT, large ships 10,000 and 100,000 GT and very large ships above 100,000 GT.

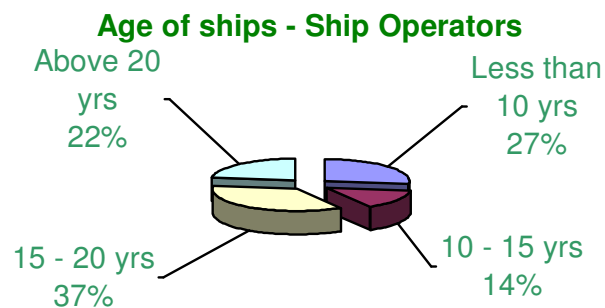
Whilst there were a small number of respondents operating ships below 500 GT, most were operating ships in the medium to large range with a strong leaning towards ships between 10,000 and 100,000 GT – there were no respondents operating very large ships.



The respondents therefore would appear to operate the most usual size of deep-sea vessel.

3.2.6 Age of ships – Ship Operator

The age profile of the vessels represented by the Ship Operators in the survey did not vary enormously from that of the Seafarer group – with a fairly even balance each side of the 15 year mark.

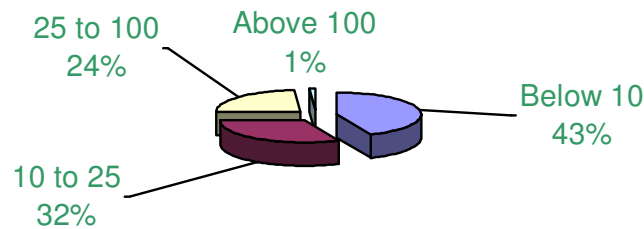


Again this sample would seem to be quite representative of the world fleet as far as age is concerned.

3.2.7 Size of fleet – Ship Operators

A quarter of the respondents appear to work for relatively large ship owning or ship management companies but the vast majority were engaged with small to medium sized operators – operating up to 25 units.

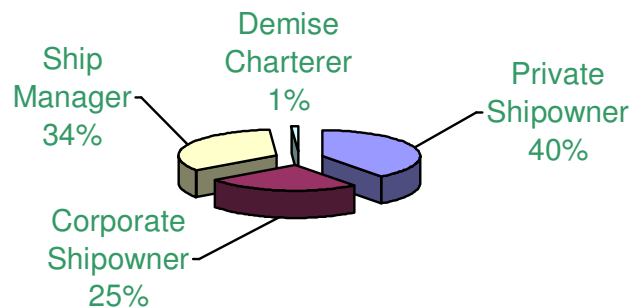
Size of Fleet - Ship Operators



3.2.8 Corporate structure – Ship Operators

From analysing the actual questionnaires it would appear that some respondents had difficulty ticking the correct box here since they seemed to operate both as ship owners in their own right as well as ship managers. What appeared to be the most appropriate category was chosen. However, there did appear to be a somewhat disproportionate number of private ship owners although bearing in mind that most of the fleets were in the small to medium size bracket – this is probably correct.

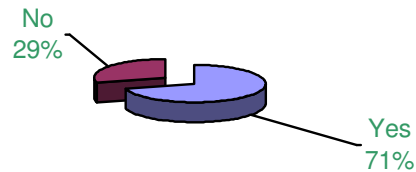
Corporate Structure - Ship Operators



3.2.9 Management system background – Ship Operators

Interestingly there was quite a significant difference between the answers given by the Seafarers to those provided by the shore side staff of the ship operators when it came to declaring the extent to which the company had previously been involved in formal QA type systems. One explanation might lie in the understanding of what constitutes a formal QA type system. Another possible explanation is that the ships were subjected to QA type systems – particularly in the lead up to Phase I implementation compared with the office ashore who might already have been familiar with such systems.

Management system background - Ship Operators



In any event, the survey still suggests that the majority of respondents from ship operator offices did have previous knowledge / experience of working in management type systems.

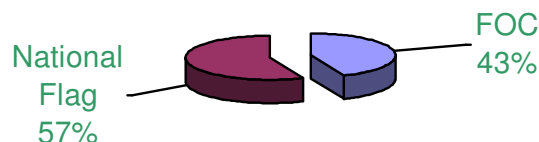
3.2.10 Flags of vessels – Ship Operators

There were surprisingly few different flags represented by the respondents:

Antigua	Greece	NIS
Bahamas	Hong Kong	Panama
Barbados	India	St. Vincent
Brazil	Italy	Sweden
British	Korea	Turkey
Canadian	Liberia	UAE
Cyprus	Malta	United States
Dutch	Marshall Islands	

Again the sample was split almost equally between companies operating ships flying their own National flag and those using FOC's / Open Registries

Flag- Ship Operator



The sample would therefore appear to represent a reasonably accurate cross section of the international industry as far as registry is concerned.

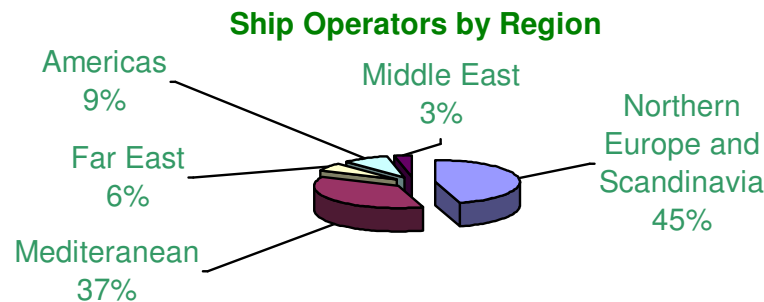
3.2.11 Main centre of operation

The other area of interest, as far as the ship operators were concerned, was where their centre of operation was based. This produced quite a list of different countries:

Bahamas	Belgium	Brazil
---------	---------	--------

Britain	India	Singapore
Canada	Italy	Spain
Cyprus	Jordan	Sweden
Denmark	Korea	Switzerland
Finland	Mexico	Turkey
France	Monaco	UAE
Germany	Netherlands	United States
Greece	Norway	
Hong Kong	Portugal	

In terms of the number of companies from each country and represented within regions – the result would be as per the following graph:



It would have to be recognised that there does seem to be a bias towards Northern European / Scandinavian ship operators with a significant under representation of ship operators from the Far East.

3.3 Other Stakeholders

Because of the diversity of individuals and organisations falling within this category it was going to be difficult and particularly labour intensive trying to contact them. Whilst some might have been picked up through the Nautical Institute and other distributions and possibly the other media coverage – it was considered necessary to make personal, direct contact and to supply the correct questionnaire form. The ‘other stakeholders’ included a very wide range of individuals and organisations – some of the more significant are set out below:

Flag State Administrations

These are the national government departments or agencies who have the responsibility for ensuring that ships flying their national flag, i.e. ships registered in their country, comply with all the relevant rules and regulations and are issued with the correct certification – including ISM certification. Many of these flag States do not actually have sufficient infrastructure or resources to undertake their obligations

and responsibilities themselves and therefore they delegate to a Recognised Organisation (R/O) – usually the Classification Society. Their contribution therefore was very important to explain how they had undertaken the verification and certification process and to describe the types of problems they had encountered. Each of the Flag State Administrations have a delegate / representative at IMO – although some countries are much more active in their participation than others. Initially, individual / personal letters and questionnaires were sent to each of the 158 member state delegates ‘care of’ the IMO address in London. That did not solicit much response and so the exercise was repeated and another full set of individual / personal letters with questionnaires were sent to their mailing address in their home countries. This did generate a more significant response but still many of the major Flag States did not respond.

Port State Control Administrations

The PSC authorities are also national government agencies / departments and attempts were also made to contact them in the same way as those attempting to solicit responses from the agencies handling the Flag State Administration duties – in many cases these departments were going to be one and the same or at least very closely related. Again, nearly 160 individual letters with questionnaires were sent. The Secretariat offices of each of the seven MOU’s around the world including the United States Coast Guard (USCG) were also contacted.

Classification Societies

The Classification Societies were very important potential contacts since they had at least three possible areas of involvement with ISM implementation:

- i) In their role as an actual Classification Society – where they would be attending vessels in connection with Classification matters – which would provide them with an opportunity to observe how the SMS was interacting with the maintenance and other Class issues.
- ii) In their role as Recognised Organisations acting on behalf of flag State Administrations
- iii) In their capacity as consultants to Companies where they provided a service setting up the particular SMS.

There are 10 full member Societies and 2 associate members of IACS (the International Association of Classification Societies) and letters and questionnaires were sent to the Secretariat of each. In addition over 600 individual letters were sent to separate branch offices of different Societies around the world. There had been suggestions made that there might be some irregular practices taking place in certain Classification Societies regarding verification and certification and it was considered important to obtain direct individual feedback as well as the ‘party line’ which might come out of head office.

ISM Consultants

Whilst the Classification Societies almost achieved a monopoly with regard to ISM Consultancy as well a verification and certification as R/O’s – there were a number of independent ISM Consultants who did manage to break into the consultancy and R/O

activities. Unfortunately only about 20 such individuals and organisations were identified. Appropriate letters and questionnaires were sent accordingly.

P&I Correspondents

Whenever there is an incident onboard ship that is likely to result in a third party liability claim the P&I Club will probably be involved. In all the major ports, and most of the secondary ports, the P&I Club will have a local Correspondent – sometimes referred to as a Representative. The Correspondent would attend to assist the vessels Master on the spot to deal with the immediate problem, and ensure that the position of the Shipowner and P&I Club are fully protected.

The P&I Correspondents therefore tend to be at the sharp-end of any incident that occurs on board – as a consequence of which they have experience of seeing many ships and seafarers in situations where the SMS is under close examination. They are therefore in an ideal situation to feed back with their experiences of ISM implementation. Through the author's own contact network individual letters and questionnaires were sent out to nearly 500 Correspondents around the world.

Surveyors and Consultants

In a similar way whenever there is a H&M or P&I type incident onboard ship, and indeed in many other situations, surveyors or specialist consultants will be instructed to investigate the incident to establish causation and to evaluate the damage. As such these individuals, who tend to be very experienced professionals, are in an ideal position to observe how / if safety management systems are working or if not what the problems might be. Letters and questionnaires were sent to about 350 individuals and surveying firms around the world.

Lawyers

Following an incident, particularly a serious incident, it is quite likely that a lawyer will be instructed to take the evidence / statements, to investigate the matter to establish causation and prepare the case for fighting in the courts or in arbitration or to enter into settlement negotiations. In a similar way to the surveyors, the lawyers are provided with an excellent opportunity to observe how the SMS has been implemented and how it is, or isn't, working. A very handy 'International Directory of Shipping Lawyers' is published in conjunction with 'P&I International' (Informa) and they kindly provided the author with an electronic version that was most useful for sending a large mail shot of letters with questionnaires to over 500 lawyers around the world.

Insurers

Whilst the P&I Correspondents, surveyors and lawyers may be involved at the sharp end of the investigation – their reports are likely to be presented to individuals within insurance organisations. These claims handlers, loss adjusters, managers, underwriters or similar are also being provided with an opportunity of observing the SMS in action – or maybe inaction! A P&I Claims handler may have many hundreds of claim files which he / she is dealing with. All the P&I Clubs were contacted with a request to circulate copies of the questionnaire around their claims handlers. Attempts were also made to send letters and questionnaires to H&M and Cargo insurers.

Nautical College Lecturers

Almost all seafarers will spend some part of their career attending a Nautical school, college, academy or similar institution. It occurred to the author therefore that the lecturers, who would invariably be ex-mariners themselves, would hear from the students passing through what they thought about ISM and how the implementation process was going on board their ships. They would also be in a position to make their own assessment as to whether there were any cultural shifts taking place in the attitude of younger seafarers towards safety. Accordingly, letters were sent to well over 300 training establishments around the world.

Pilots

In the vast majority of cases, when a large ship approaches or leaves port they will utilise the services of a local pilot who can advise the Master on navigational issues in that port or harbour. In practice the pilot would usually take the ship from the pilot station to its berth. It can be appreciated therefore that any one pilot would have an enormous and varied experience of all different types, sizes and nationalities of ship. More importantly they would see first hand how the Masters, officers and crew – as well as the machinery – work and how the SMS was operating in practice. In addition to a small number of individual letters, a request was submitted to the International Pilotage Association (IPA) asking for help to encourage their Pilot members to participate and share their experiences.

Professional bodies and Trade Unions

Whilst Nautical and Marine Engineering Professional Bodies as well as seafarers trade unions and similar bodies were contacted in an attempt to get the questionnaires to the seafarers – it was also recognised that it would be useful and interesting to have feedback from the administrative and managerial staff of those organisations – to establish their views and observations.

Others

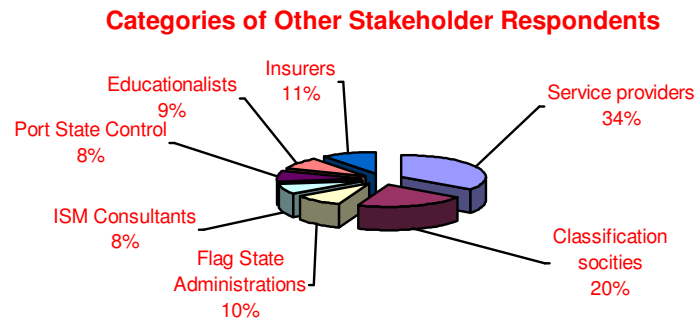
There were many other individuals and groups who were also contacted with a variety of backgrounds - as wide ranging as ships agents to marine biologists and conservationists, chaplains and accident investigators.

3.3.1 Who responded? – Other Stakeholders

In an attempt to keep the illustrations relatively uncluttered, the various individual categories of respondents have been grouped together as follows:

- Service providers – e.g. agents, lawyers, surveyors, consultants, shipbrokers etc
- Classification societies – in all their various guises
- Flag state Administrations
- ISM Consultants
- Port State Control – including the various government agencies as well as the secretariats of the MOU's

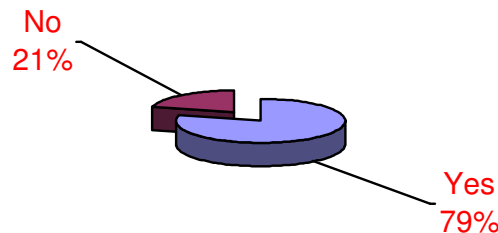
- Educationalists – including college lecturers, academics and other training providers
- Insurers



The actual numbers of respondents who submitted completed questionnaires was not great – about 460. However, this group submitted numerous detailed narrative reports providing considerable insight into the status of ISM implementation as seen through the eyes of third party observers (although it clearly some of these observers would be very close to the implementation process – e.g. Flag State Administrations and RO's.).

As a matter of interest, and for completeness sake, the respondents were also asked to indicate whether or not they were ex-seafarers themselves. They responded as follows:

Other Stake Holders - Ex-Seafarers?



Perhaps not unexpectedly the majority of the Other Stake Holder category who responded did have a sea-going background.

3.3.2 Geographical base of respondents – Other Stakeholders

Also for completeness sake it was considered appropriate to establish where the ‘other stake holder’ were based which would perhaps help identify any possible parochial bias which might exist. In fact they came from far and wide:

Australia
Belgium
Brazil
Britain

Canada
Chile
Colombia
Croatia

Denmark
Finland
France
Germany

Greece	Malaysia	South Africa
Hong Kong	Netherlands	Spain
India	New Zealand	Sweden
Ireland	Norway	Taiwan
Israel	Philippines	Thailand
Italy	Poland	Turkey
Jamaica	Portugal	UAE
Japan	Russia	United States
Korea	Singapore	

3.4 Survey participants – data and information

There is an enormous amount of data in the database from the completed questionnaires received from the three main categories of respondents. This is of considerable importance but the full potential of this data will not be realised within the scope of this review. There will be an almost limitless number of permutations of queries which can be run on the relational data base. Within the scope of this survey a focus had to be maintained on key areas and a restriction had to be placed on the issues considered. It is vital that others who will make good use of it are given the necessary access. There is also a unique catalogue of detailed comments, observations, reflections and experiences received from nearly 800 individuals which provide an invaluable insight into ISM implementation which again cannot be fully utilised within this review but others who have the resources to explore related issues must make use of that data for the benefit of the shipping industry and in particular those who go to sea.

4 ISM Implementation

What do we mean when we talk about compliance with ISM? This may appear, at first sight, a very simple and straightforward question – it actually turns out to be extremely complicated. We could talk in terms of a process of verification leading to certification. Once the ship operator is issued with a Document of Compliance (DOC) and the ship with a Safety Management Certificate (SMC) we could say that that Company and that ship are ISM compliant. The problem is that there is no one, universally accepted, set of standards against which all systems are measured.

The author's view is that the procedures manuals and even the DOC and SMC represent no more than 20% of what is needed to comply with ISM and, at best, provide only a suggestion that the Company and ship have successfully implemented a Safety Management System (SMS). Only once the written procedures and the SMS have become a dynamic, living part of the way things are done will ISM implementation have been fully achieved. What will be necessary to reach such an achievement should not be underestimated. It will take a lot of time, a lot of hard work and a lot of personal commitment by all involved. The end result however promises rich rewards.

4.1 The SMC's and DOC's

The government of the state whose flag the ship is entitled to fly – the 'Administration' – is responsible for verifying compliance with the requirements of the ISM Code and for issuing the appropriate certificates. The requirements are set out in the new 'Part B – Certification and Verification' of the Code which has been significantly expanded in its scope following amendments in December 2000 by resolution MSC.104(73) – which entered into force on 1 July 2002. Section 13 deals with 'Certification and Periodical Verification:

PART B – CERTIFICATION AND VERIFICATION

13 CERTIFICATION AND PERIODICAL VERIFICATION

- 13.1 The ship should be operated by a Company which is issued a Document of Compliance or with an Interim Document of Compliance in accordance with paragraph 14.1, relevant to that ship.
- 13.2 The Document of Compliance should be issued by the Administration, by an organisation recognised by the Administration or, at the request of the Administration, by another Contracting Government to the Convention to any Company complying with the requirements of this Code for a period specified by the Administration which should not exceed five years. Such a document should be accepted as evidence that the Company is capable of complying with the requirements of this Code.
- 13.3 The Document of Compliance is only valid for the ship types explicitly indicated in the document. Such indication should be based on the types of ships on which the initial verification was based. Other ship types should only be added after verification of the Company's capability to comply with

	the requirements of this Code applicable to such ship types. In this context, ship types are those referred to in regulation IX/1 of the Convention.
13.4	The validity of a Document of Compliance should be subject to annual verification by the Administration or by an organisation recognised by the Administration or, at the request of the Administration, by another Contracting Government within three months before or after the anniversary date.
13.5	The Document of Compliance should be withdrawn by the Administration or, at its request, by the Contracting Government which issued the Document when the annual verification required in paragraph 13.4 is not requested or if there is evidence of major non-conformities with this Code.
13.5.1	All associated Safety Management Certificates and / or Interim Safety Management Certificates should also be withdrawn if the Document of Compliance is withdrawn.
13.6	A copy of the Document of Compliance should be placed on board in order that the master of the ship, if so requested, may produce it for verification by the Administration or by an organisation recognised by the Administration or for the purposes of the control referred to in regulation IX/6.2 of the Convention. The copy of the Document is not required to be authenticated or certified.
13.7	The Safety Management Certificate should be issued to a ship for a period which should not exceed five years by the Administration or an organisation recognised by the Administration or, at the request of the Administration, by another Contracting Government. The Safety Management Certificate should be issued after verifying that the Company and its shipboard management operate in accordance with the approved safety management system. Such a Certificate should be accepted as evidence that the ship is complying with the requirements of this Code.
13.8	The validity of the Safety Management Certificate should be subject to at least one intermediate verification by the Administration or an organisation recognised by the Administration or, at the request of the Administration, by another Contracting Government. If only one intermediate verification is to be carried out and the period of validity of the Safety Management Certificate is five years, it should take place between the second and third anniversary dates of the Safety Management Certificate.
13.9	In addition to the requirements of paragraph 13.5.1, the Safety Management Certificate should be withdrawn by the Administration or, at the request of the Administration, by the Contracting Government which has issued it when the intermediate verification required in paragraph 13.8 is not requested or if there is evidence of major non-conformity with this Code.
13.10	Notwithstanding the requirements of paragraphs 13.2 and 13.7, when the renewal verification is completed within three months before the expiry date of the existing Document of Compliance or Safety Management Certificate, the new Document of Compliance or the new Safety Management Certificate

should be valid from the date of completion of the renewal verification for a period not exceeding five years from the date of expiry of the existing Document of Compliance or Safety Management Certificate.

13.11 When the renewal verification is completed more than three months before the expiry date of the existing Document of Compliance or Safety Management Certificate, the new Document of Compliance or the new Safety Management Certificate should be valid from the date of completion of the renewal verification for a period not exceeding five years from the date of completion of the renewal verification.

The new Sections 14, 15 and 16 deal with 'Interim Certification', 'Verification' and 'Forms of Certificates' respectively.

The IMO originally issued a set of Guidelines on the Implementation of the ISM Code by Administrations by Resolution A.788(19). These Guidelines were replaced with Revised Guidelines, which were adopted by resolution A.913(22) in November 2001. This resolution revokes A.788(19) as of 1 July 2002. Some of the more significant issues have now been taken out of the Guidelines and incorporated into the expanded Section 13 plus Sections 14, 15 and 16 of the amended Code.

There are therefore three bodies who might issue the DOC and SMC:

- The Administration itself – i.e. the Flag State
- An organisation recognised by the Administration – often referred to as an R/O (Recognised Organisation)
- Another Contracting Government.

Few Administrations would appear to have sufficient resources, expertise or possibly even the will to undertake their own verification and certification. The United Kingdom is one of the few who are undertaking these functions themselves, through the offices of the Maritime and Coastguard Agency. As part of his initial research the author wrote to 150 Flag States, care of their delegate who might attend IMO meetings, asking for information about their approach towards verification and certification – very few responses were received. Further attempts were made to obtain the information but still the vast majority of the Flag State Administrations did not provide any information.

The majority of Administrations appear to have delegated the tasks of verification and certification to Recognised Organisations (R/O's). Whilst there are a small number of Independent R/O's, almost all of the delegation has been to the Classification Societies.

As far as delegating to another Contracting Government is concerned, it would appear that the MCA, on behalf of the British Government, have occasionally undertaken such work at the request of other Governments and have, on even rarer occasions asked other Governments to undertake such work on board UK registered ships.

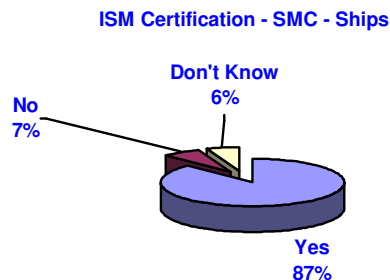
The IMO have endeavoured to encourage flag State Administrations to face up to their responsibilities but with limited success. For example MSC.Circ.889 / MEPC.Circ.353 deals with 'Self Assessment of Flag State Performance' along with MSC.Circ.954 / MEPC.Circ.373 'Self Assessment of Flag State Performance: Criteria and Performance Indicators'. It provides Administrations with guidance on measuring their performance and asks them to advise IMO how well they are progressing. As far

as can be established, the Administrations who are cause for concern do not tend to participate in such initiatives.

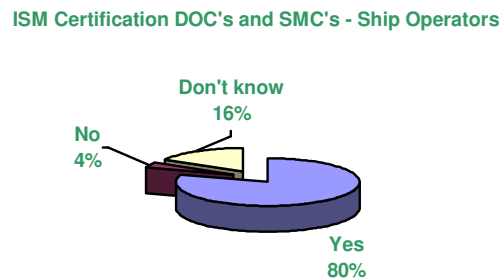
4.1.1 Is the certification in place?

This may appear to be a strange question to ask – however, it should be recalled that the survey was originally undertaken between the Phase I and Phase II deadline dates. The purpose of the question was to provide the possibility to establish whether there were any different perceptions between those who had already obtained their DOC's and SMC's and those who were still working towards full verification.

In fact almost 90% of Seafarer respondents indicated that they already possessed their SMC on board. Only 6% admitted that they didn't know whether or not they had such a certificate. Many of the Phase II ships on which respondents were serving would appear to have gone for verification and certification early.



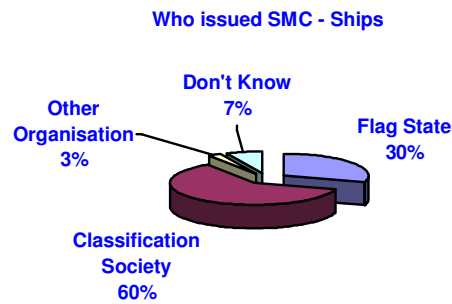
A little surprising from the ship operators side was that 16% of the respondents didn't seem to know whether or not the Company had a valid DOC or the ships SMC's. Apart from that, as would be anticipated, most Companies did hold a DOC and did have SMC's for their vessels.



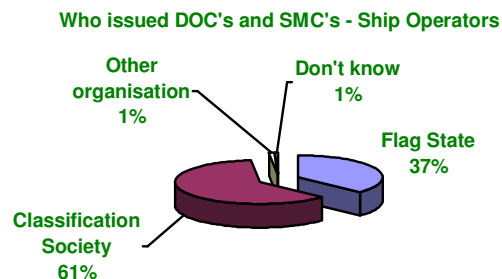
4.1.2 Who issued the Certificates?

Because a significant number of the questionnaires were distributed to British Masters and officers through the Seaways journal and the NUMAST telegraph – it is probable that a disproportionate number of responses came from people working on board UK registered ships or ships flying affiliated flags. Therefore the results received may not accurately reflect the true global picture.

The responses from the Masters and other Seafarers indicated that nearly two thirds of all the Safety Management Certificates were issued by the Classification Societies with nearly one third being issued by the actual Administration.



The responses from the Ship Operators, which also included the issuer of the DOC, mirrored very closely the results from the Masters and Seafarers with nearly two thirds of the documents being issued by the Classification Societies and one third by the actual Administrations.



Clearly the Classification Societies hold a very powerful position with regard to Verification and Certification of very substantial sections of the world fleet. In some respects this may help to introduce a level of standardisation and uniformity into the verification process but on the other hand some caution may be in order when so much power and authority is placed in so few hands.

Other related problems, and causes of possible concern, were raised by various respondents. An engineer shared his experiences:

I was part of the 7 member team tasked with implementing the ISM code into Ferry operation between '96 and '99. We have 40 vessels certificated and have passed our first verification audit from one of the leading classification societies. My concern is that the classifications societies are not strict enough when they note non-conformities. This seems a common problem in that the flag states, for the most part, are not up to speed and do not have their own auditors trained to carry out the verification audit on their own behalf. The classification societies do not want to be too strict with the hand that feeds them, and so we have created a "paper tiger", with no apparent claws.

4.2 Procedures manuals

Supporting the SMS will be a set of Procedures Manuals and possibly other documents that should be the subject of formal document control.

The individual company's SMS should encompass all of the requirements of the ISM Code. The structure of the company's documentation should be adapted to suit the company's culture, size and the trading pattern of its ships.

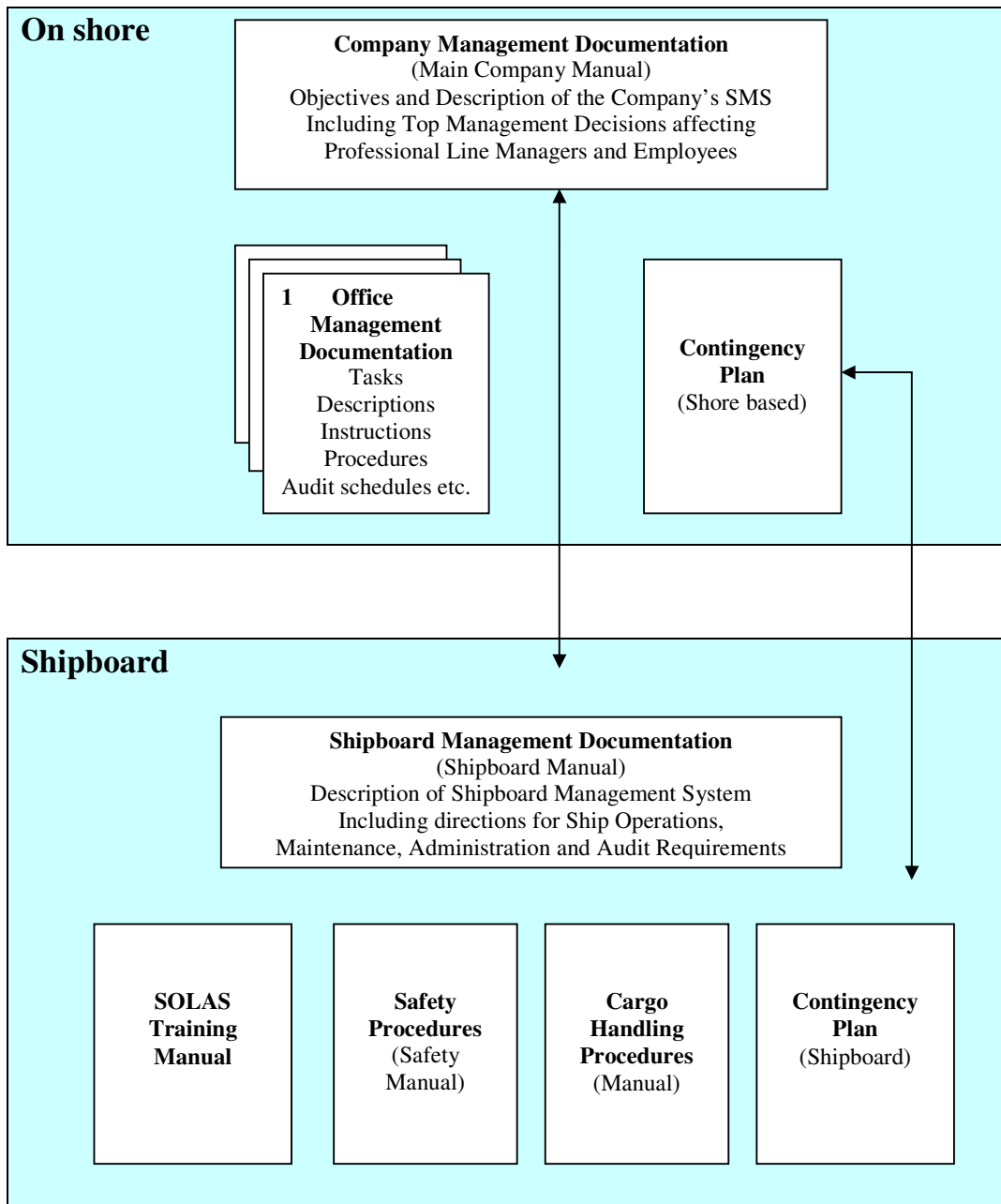
The SMS documentation should consist of both office and shipboard manuals. These manuals should be organised in a manner which allows all employees concerned with the SMS to readily refer to its relevant provisions in the satisfactory performance of their duties.

The company should ensure that the relationship between the SMS and other shore and shipboard systems are properly understood, and that relevant references and interconnections are established.

It would appear that many companies, for a variety of reasons, have ended up with documented procedures that maybe inappropriate and too voluminous.

The SMS documented procedures do not have to be voluminous or overly complicated. The ICS / ISF have provided a possible structure for an uncomplicated SMS documentation system (ICS / ISF Guidelines):

Possible structure for SMS Documentation



In Chapter 7 we will examine, in some detail, a recent judgement handed down from the High Court in London relating to the vessel *Eurasian Dream* where the ship operator was very severely criticised because of the voluminous, and yet inadequate and inappropriate set of SMS procedures documents which they had put on board that ship. This actually contributed to the vessel being found to be 'unseaworthy' and, further, the carrier had failed to exercise due diligence to make the vessel seaworthy.

It is not known just how many of the SMS documentation systems would fall into a similar category to that found on the *Eurasian Dream*. There would appear to be many that are far from adequate. A New Zealand Master gives one such example:

“I have recently sailed on a container ship which has had manuals developed entirely from ashore and it was terribly complicated to access information and any non-conformities to do with procedures documented in manuals were ignored due to the fact the author / DPA / safety manager could see no wrong with his work. This created a defeatist attitude with sea-staff to not bother to report or seek change.”

Clearly, such a system has no value at all and is doomed to failure if the Master on board and his officers and crew have no confidence in the documentation. At the end of the day it is those very people who will need to bring the procedures alive through implementation – surely they are in one of the best positions to evaluate the effectiveness and appropriateness of the system. It is suggested that those on board must have their say in the design of the SMS and the implementation of corrective actions within the cycle of continual improvement if the system is to work. A manager from a ship operator’s office explained the importance his company put on this aspect:

I believe the key for us in implementation was to involve sea staff as much as possible in preparing procedures and so on even although this slowed down the process it was worth the effort.

Developing that sense of ‘involvement’, which in turn will lead to the sense of ‘ownership’, has got to be worth taking the time to achieve properly.

4.2.1 Who prepared / produced the procedure manuals?

Following on from what has just been said, it is of crucial importance to consider who actually produced the procedures manuals. If care has not been taken in the production of the Manuals then it is almost certain that the SMS itself will never be successfully implemented. A Port State Control Inspector has taken the issue to its conclusion in two very short sentences:

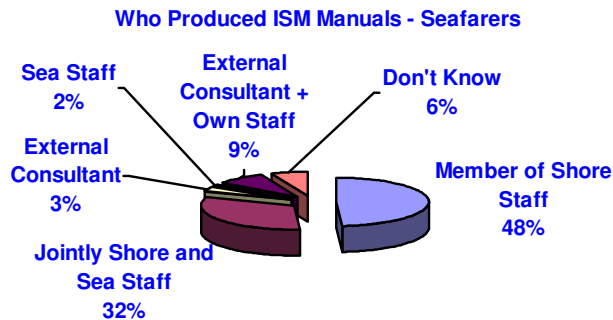
“Very few Safety Management Manuals have been completed with assistance of ships staff. Most crews feel ISM unnecessary burden and merely a paperwork exercise.”

Stories of ‘off-the-shelf’ sets of procedures manuals have abounded since the lead-up to phase one implementation in July 1998. So called ‘ISM consultants’ were, apparently, offering these ready made Safety Management Systems for sale and merely changed the name of the vessel on the front page of the document. Unfortunately many of the responses to the survey seem to confirm that such practices have been widespread. An Indian Master summarised his experiences in the following terms:

“1. A major amount of benefit of the ISM system was to the consultants who made the manuals / drew up the ISM for the system, which in many cases was drawn up without any consideration to the type of operator (i.e. his commitment) – manuals are blindly copied from standard companies. Checklists are filled in just before inspection etc. without actually checking.

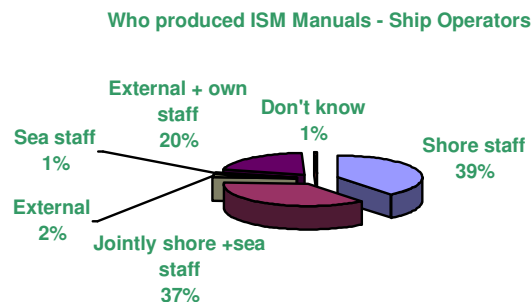
2. *Though the advantages are obvious (i.e. only if implemented properly and with commitment) unfortunately it is looked upon (still) as a nuisance (due to the time restraints)*
3. *Commercial pressure compels (there are many more people willing to take your job) you to do things well beyond the scope of the ISM. Though on the first line in the manuals is 'Safety will not be compromised due to commercial reasons' – that is the first thing compromised (read as fatigue / rest hours etc.)*

The questionnaire therefore asked for information about who prepared or produced and wrote the ISM Manuals on board their ships. The available choices were structured to try and provide an opportunity to select from most permutations.

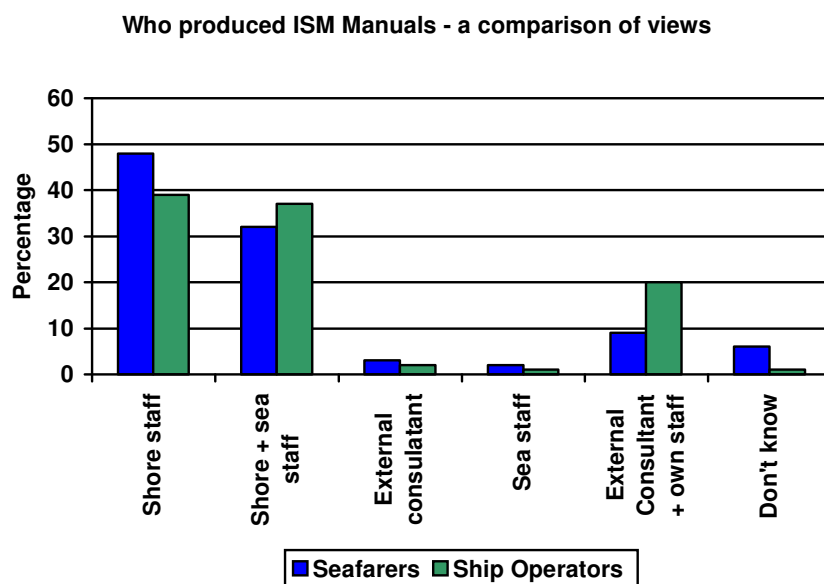


It would appear that well over a half of the Masters and Seafarers who responded believed that there was little or no involvement of the Sea-staff in the production / writing of the ISM procedures manuals and, presumably, in the development of the SMS which had been produced for their vessels. That is clearly serious cause for concern if true. Looking at the positive side though, one third of respondents claim that it was indeed a 'team effort' between sea staff and shore staff to develop their ISM Manuals and, consequently, their SMS. It is in that level of participation that the concept of 'ownership' of the system can start to take a hold. Once there is a sense of 'ownership' of the system by those on board, and in the office, then the safety culture can take hold and, it is suggested, the full benefits can be almost guaranteed!

The Ship Operators were asked to consider the same question. Interestingly the results were quite similar with perhaps a little greater emphasis on the thought that the bigger input in the development of the Manuals came from shore staff and external consultants rather than the involvement of the sea staff.



A comparison of views on the results of the answers to this question illustrate the similarities and differences of perceptions between the two groups:



4.2.2 Does it really matter who produced the manuals?

Not everyone would appear to agree though with the underlying idea that each Company should develop their own, ship specific, Safety Management Systems – which is one of the core ideas of the ISM Code. The Managing Director of a Greek ship owning company expressed his view in the following terms:

“The ISM Code would be better succeed its proposal if a model manual with minimum requirements adopted by all parties concerned placed into force. The current status allows any party concerned to make own rules.”

Of course the ISM Code, in paragraphs 4 and 5 of the Preamble, makes it very clear that ship operators are encouraged to steer away from ‘model manuals’ and to ‘make their own rules’ – at least in the sense of developing their own system. Whilst the views of the Greek MD might be totally contrary to the clear and stated intentions of the ISM Code itself, it is suggested that we should not discard his thoughts out of hand. There appears to be a presupposition behind the ISM Code that every ship operating company and every ship will be able to develop a SMS in their own unique way and make it work for them. We should perhaps always be prepared to challenge any such presuppositions and consider whether that ideal situation is capable of being achieved in every instance. If it is not – is the only solution to force that company and those ships out of existence? Such thoughts should not be considered in any way as being defeatist – merely keeping an open mind and being prepared to look at all problems in a healthy and constructive way.

It is not just the Masters and Seafarers who have expressed concern about the dangers and utter folly of ‘off the shelf’ systems. A Port State Control Inspector shared the following observations:

“Many companies (I feel) just go thru the motions, they must be seen to do the right thing. In many cases the ISM system is bought from somewhere else with no consideration to the specific ship in question. The result is a nightmare of papers and procedures that no person is able to use as it should have been. The crews are complaining about the mass of papers that bears no relevance to their daily work situation. Ashore they are probably happy, they have a “system” and certificates to prove it. I think that there is a difference between the ones audited by the Classification Societies and the Flag Authorities, in my opinion the latter is the better.”

Clearly, in light of the *Eurasian Dream* decision any ship operator who does have such a system in place is steaming straight into very dangerous waters. The comments of the judge would clearly indicate that an inadequate / inappropriate set of procedures manuals may very well render a vessel unseaworthy. As such the ship operator may lose any right to rely upon the Hague-Visby defences, for example. There must also be a risk that the ship operator may lose its right to limit its financial liability and may even lose its insurance cover. The full consequences and implications of an inadequate SMS should not be under-estimated.

In the *Eurasian Dream* Judgement, which is considered in some detail in Chapter 7, the Judge created quite a long list of activities, all of which would no doubt be classed as ‘key shipboard operations’ as anticipated by Section 7 of the Code, and no doubt for another incident an equally long list could be produced. Clearly there is a danger of going over the top and trying to provide a detailed procedure for every possible and conceivable situation. That surely cannot be the intention since the number of volumes of procedures manuals would quickly be back up to double figures. A balance is needed to avoid the dangers highlighted in the following comments received from a Port State Control inspector:

“The theory of ISM is excellent. Most Masters & Chief Engineers I interview express a frustration with the volume of record keeping they are required to maintain, while at the same time they state that ISM has definitely helped develop a more safety conscious culture which is good for the crews, vessels and environment. The two worst ISM systems are: 1) In which there is such a plethora of detail that it overwhelms the vessel's crew thereby creating problems, and 2) In which the system is so generaliiized that it provides too little guidance for the crew and is virtually worthless. The best systems provide enough guidance yet do not snow under the crews with avalanches of forms. I regularly inspect vessels which use the ISM Forms but do so by rote, checking off items without really determining that the items have been properly addressed.”

The importance of involving those on board, in particular, should never be under estimated. The full sense of ownership of the system will develop as a natural

consequence from direct involvement and active participation in all aspects. An Indian Second Engineer put forward a very useful four part formula which should help lead towards that feeling of ownership of the system and the development of a true 'safety culture':

"Ship staff involvement should be given high priority for making company policies.

Top managers on ship should be able to write each other's reports in form of performance.

Transparency of work on ship and office is of prime importance.

Blaming attitudes should be avoided.

It is very likely that some, maybe many, ship operators will have to look very carefully at the SMS documentation systems they currently have in place and recognise that perhaps they need to undertake a major overhaul. In some cases it may be a matter of starting again from scratch. It is strongly recommended that ship operators look at the development of their SMS as an investment; an opportunity to make their ships and their operation more efficient as well as safe. With that efficiency and increased level of safety will come a reduction in accidents, claims and other uninsured losses. It will be an exercise to plug the drains and stop all that money being allowed to flow away. However, to do it properly requires commitment from the top of the organisation and belief that it can work. Those who are going to be directly involved in the implementation of the SMS should be consulted and be involved in the design and construction stage.

The greatest waste of money, time and other resources is to try and plough on with an inadequate / inappropriate SMS in the hope that nothing serious will happen and that there is sufficient in place to 'pull the wool' over the eyes of the Port State Control Inspectors – they are becoming more sophisticated and knowledgeable as each day goes by!

4.3 The Designated Person

The full significance of the role of the Designated Person (DP) is still far from clear. This was a new position created by the ISM Code although, apparently, the idea was not incorporated until fairly late in the drafting process of the Code.

There is still much speculation about the role and legal exposure of the Designated Person amongst lawyers and academics but, as far as the author is aware, there have been no judicial decisions providing clarification of the areas of doubt. The author is also unaware of any prosecutions against a DP by the English Courts.

4.3.1 The role of the Designated Person

The Code defines the role of the Designated Person (DP) in section 4 where it states:

4 DESIGNATED PERSON(S)

To ensure the safe operation of each ship and to provide a link between the Company and those on board, every company, as appropriate, should designate a person ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and

pollution-prevention aspects of the operation of each ship and ensuring that adequate resources and shore-based support are applied, as required.

Interestingly there is no real suggestion or guidelines as to the actual qualifications or experience of the DP within the ISM Code itself. As the following surveyor points out – there does not appear, on the face of it, any specific requirements as to the DP’s qualifications:

*“There are no provisions on the ISM nor on the SOLAS and neither on the STCW 95 as regards to qualifications to be held by the Designated Person Ashore”
Spanish Surveyor*

The ISM Code was incorporated into English Law through Statutory Instrument *SI 1998 No 1561* – at Section 8 it provides some further guidance on the Designated Person where it states:

Designated Person

8. (1) The company shall designate a person who shall be responsible for monitoring the safe and efficient operation of each ship with particular regard to the safety and pollution prevention aspects.

(2) In particular, the designated person shall –

- (a) take such steps as are necessary to ensure compliance with the company safety management system on the basis of which the Document of Compliance was issued; and
- (b) ensure that proper provision is made for each ship to be so manned, equipped and maintained that it is fit to operate in accordance with the safety management system and with statutory requirements.

(3) The Company should ensure that the designated person –

- (a) is provided with sufficient authority and resources; and
- (b) has appropriate knowledge and sufficient experience of the operation of ships at sea and in port, to enable him to comply with (1) and (2) above.

The ICS / ISF provide some further practical suggestions on the role of the DP (ICS / ISF Guidelines):

“...The task of implementing and maintaining the SMS is a line management responsibility. Verification and monitoring activities should be carried out by a person independent of the responsibility for implementation.

The designated person(s) should be suitably qualified and experienced in the safety and pollution control aspects of ship operations and should be fully conversant with the company’s safety and environmental protection policies.

The designated person(s) should have the independence and authority to report deficiencies observed to the highest level of management.

The designated person(s) should have the responsibility for organising safety audits, and should monitor that corrective action has been taken...”

A very important role, in the view of the author, and one which does not always appear to be fully appreciated – is as a crucial link between the office ashore and those on board ship (and vice versa). Whilst in many companies superintendents still perform an important function as a link between ship and shore – in many other companies that function would appear to be eroding away and in some cases almost non-existent. It is argued that a good ‘safety culture’ can only stem from a good ‘company culture’. A good ‘company culture’ can only arise when there is a genuine feeling by everyone, both ashore and on board, that they are all singing from the same song sheet. To achieve that necessary culture it is crucial that there is a good and effective system of communication – particularly where issues of safety management are concerned. A good DP will be instrumental in building that bridge.

4.3.2 Potential legal issues involving the role of the DP

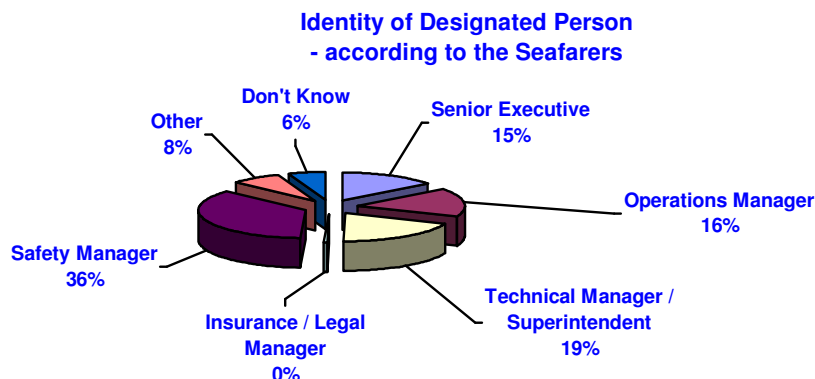
Whilst there does not appear to have been any prosecutions against a DP in the English Courts there would appear to be a few examples arising in other parts of the world. Possibly the most widely reported was the incident involving the vessel *‘Freja Jutlandic’*. It would appear that criminal prosecutions were commenced by the US Federal prosecutors against the Owners, Operators, Master and DP of the vessel. The main allegation against the DP seemed to be that he had instructed the Master to conceal from the US Coast Guard some temporary and potentially hazardous hull repairs which had been carried out. It was further alleged that the DP had conspired with the Master to falsify log books and avoid expenses to maintain a safe and seaworthy vessel. The US Prosecutor alleged that there had been oily water discharges from the vessel which occurred during a number of port calls in the United States. The penalty facing the DP, if convicted, was up to five years imprisonment and a criminal fine of up to US\$250,000 under each charge.

The prosecution appears to have been frustrated for a number of reasons – partly because the owners and operators declared themselves bankrupt in Denmark. However, the principle had been well and truly established in the US that the DP is clearly identifiable and does have specific responsibilities for safety and pollution prevention. The DP is, therefore, exposed to being personally cited in both civil and criminal proceedings.

4.3.3 Who is the DP?

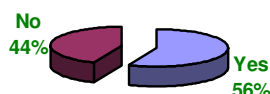
The survey tried to identify who had ended up assuming the role of DP. The list of choices was obviously not exhaustive but appears to have been adequate to catch almost all situations.

The question also tested whether the seafarers really did know the identity of their own DP. The result indicated that only 6% of seafarers did not know the identity of their DP which is very encouraging.

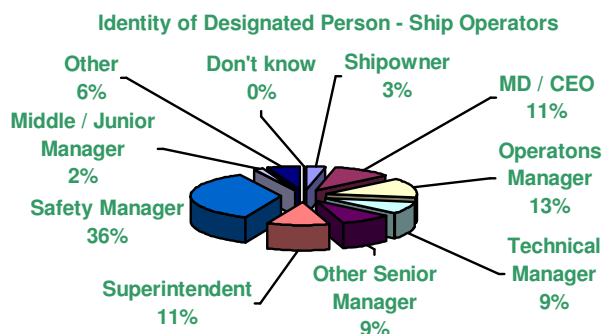


In addition to asking the 'Ship Operator' category the same question – the opportunity was also taken to establish whether the respondent was indeed the DP for their company. It could certainly be anticipated that a questionnaire relating specifically to ISM implementation would tend to gravitate towards the desk of the DP and would tend to be of more interest to that individual. However, it was pleasing to see that the completed questionnaires were returned from almost equal numbers of DP's and other members of management and staff from within the operator's office.

**Designated Person
- From Ship Operators Respondents**



Interestingly there was very close agreement on the identity of the DP between the two groups. For both Seafarers and Ship Operators there were 36% of cases where the DP was also the Safety Officer. There were 35% of instances from seafarers and 33% from ship operators where the DP was also an Operations Manager, Technical Manager or Superintendent i.e. line managers who probably have the task of implementing and maintaining the SMS. There were also a number of DP's in very senior positions including the actual ship owner themselves as well as MD / CEO.



Clearly the size of the company is going to have a bearing on the identity of the DP and what other functions that DP may perform. In a large ship management company, for example, there may well be a number of dedicated DP's who do not have any other function or maybe incorporate safety officer. In a small two ship company where there might not be more than three people in total in the office then it is unlikely, in practice, that they can afford the luxury of a dedicated DP who would not have many other job functions. In an ideal world the DP should be free to devote his or her full time to monitoring the SMS and taking what steps might be needed to ensure that it is working efficiently.

4.3.4 Potential difficulties for the DP

When the ICS / ISF suggested that "...The task of implementing and maintaining the SMS is a line management responsibility. Verification and monitoring activities should be carried out by a person independent of the responsibility for implementation..." they no doubt had in mind a potential conflict which might arise in certain companies between the technical and commercial operation of the ship and safety issues. This is hinted at by the following Safety Manager:

"The position of D.P. should be revised to be outside the line management of the company, and be responsible direct to the highest levels of management (CEO / COO). Interference from any senior company management ashore, not interested in the SMS, reduces the effectiveness of the system."
British Safety Manager

It is not difficult to imagine examples of the sort of situations that might arise. It may be that the ship has a very tight sailing schedule to maintain or an imminent cancelling date on the next charter to meet. The ships' staff are not properly rested, the cargo compartments need cleaning and the vessel will need to proceed at full speed through some busy shipping lanes to reach the next port on time. Whether perceived or real - the Operations Manager may apply pressure to sail regardless, to meet the deadline. It may be that problems had been encountered with say the emergency fire pump which needed some new parts fitted as well as a complete overhaul. The Chief Engineer had submitted a report and request to the office but the Superintendent responds with advice that it will be included on the work schedule for the next dry-dock which is due the following year.

In these situations the DP should have the authority, and be provided with the resources, to ensure that the safety considerations are given priority over commercial or other budgetary factors. Having said that, it was encouraging to note that the real intention and potential significance was being recognised by a number of enlightened managers – such as the following Operations Manager who was also the DP:

"...ISM has different meaning for different people. We use ISM in an enhanced form to manage our entire operation, i.e. it is the way we work and relates to all aspects of operations not only safety & the protection of the environment. For us it is successful. Many companies, however, require only the certification and do not actively use their SMS to enhance their management. This attitude will change with time and therefore in the longer view the ISM Code will contribute to a better managed and more professional ship management industry. Many operate at a higher level already

but ISM will drag the base level higher. In summary we are better off with ISM than without it...”

As time progresses and the full benefits of a properly implemented SMS are better understood and accepted then we should see less conflict / tension between the role of the DP and the activities of the line managers.

4.4 Internal Audits

The real purpose and meaning behind the internal audit was explained very well in the ICS / ISF Guide when it described the situation in the following terms:

“In carrying out internal SMS audits companies measure the effectiveness of their own systems. Internal audits are potentially more important than external audits for controlling the effectiveness of the system, since companies stand to gain or lose more than the external audit bodies if the system fails. The company, its employees, shipmasters, officers and crews ‘own’ the safety management system and have direct interest in ensuring that it is effective. As a result, the internal SMS audit, which represents these interests, should be at least equal to if not exceed the thoroughness of the external audit process.”(ICS / ISF Guidelines)

Indeed a Canadian ship operator put it very strongly – in his view:

From my point of view the attitude, competence and perceived credibility of the Company’s internal auditors are critical to the whole process. They make it or break it!

The requirements for undertaking internal audits are set out in Section 12 of the Code. The audit is a crucial part of the cycle of continual improvement to check whether those who are involved in implementing the SMS are actually doing what they say they are doing.

COMPANY VERIFICATION, REVIEW AND EVALUATION

- 12.1 The Company should carry out internal safety audits to verify whether safety and pollution-prevention activities comply with the SMS.
- 12.2 The Company should periodically evaluate the efficiency of and, when needed, review the SMS in accordance with procedures established by the Company.
- 12.3 The audits and possible corrective actions should be carried out in accordance with documented procedures.
- 12.4 Personnel carrying out audits should be independent of the areas being audited unless this is impracticable due to the size and the nature of the Company.

- 12.5 The results of the audits and reviews should be brought to the attention of all personnel having responsibility in the area involved.
- 12.6 The management personnel responsible for the area involved should take timely corrective action on deficiencies found.

Something that is of crucial importance in understanding the function of the internal audit is that the self-regulatory principles of the ISM Code makes the role of the company paramount. Part IV of the ICS / ISF Guide sets out some 'Internal Safety Management System Audit guidelines'. What is not at all clear from Section 12 of the Code is who exactly should be conducting the internal audits on board ship. Should it be the seafarers working on board ship or should it be a Superintendent or similar from the office ashore?

One thing it does say is that '...each audit is to be carried out by personnel who, at the time of the audit, are independent of the area, office or shipboard department or activity being audited...' (Section 12.4) The ICS / ISF Guide suggests that for the purpose of carrying out shipboard SMS audits, companies may find internal auditors from the following sources:

- company managers, including safety, operations and technical managers;
- masters, chief engineers and senior officers; and
- third party SMS auditors

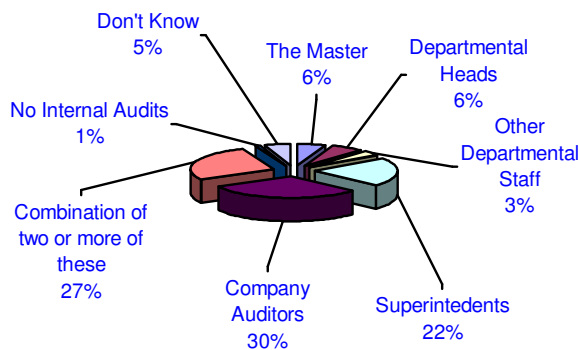
It is suggested that the background of the auditor, from the above three options, can make an enormous amount of difference to the way in which the whole of the SMS functions. Before exploring the reasons why that might be – the results of the survey will be considered to see who in practice is conducting the internal auditing.

The idea behind the 'Company Verification, Review and Evaluation' – and in particular the internal audits is to provide a means by which the Company can measure the effectiveness of its own systems. It has been suggested from the early days of ISM implementation (See for example the ISF / ICS 'Guidelines Page 34) that internal SMS audits are potentially more important than external audits for controlling the effectiveness of the system. The important point to recognise is that it is the Companies who stand to gain or lose more than the external audit bodies if the system fails. The suggestion is therefore that the Company, its employees, Masters, Officers and Crew should develop and recognise an 'ownership' of the Safety Management System. In this way they will understand and appreciate that they have a direct interest in ensuring that it is effective.

4.4.1 Who conducts internal audits?

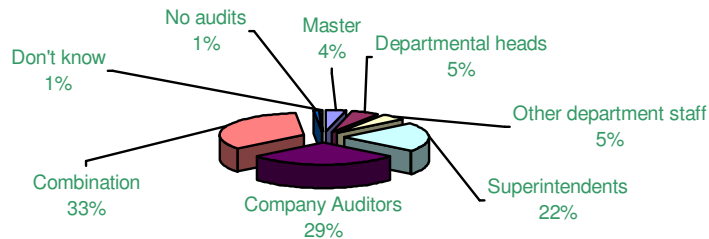
This question proved to be a little more difficult to answer than was first anticipated when the questionnaire was originally drafted. A significant number of both seafarers and shore-based staff appear to have found the idea of the seafarers actually conducting their own internal audits to be quite strange. Indeed it transpired from the survey that most internal audits are at least controlled if not actually conducted by staff from the office ashore.

Who conducts internal audits - seafarers



The responses from the Ship Operators shore based staff mirrored the Seafarers account of the situation very closely.

Who conducts internal audits - Ship Operator



The author would have to admit to being quite surprised that the internal auditing was so closely controlled from the office ashore rather than allowing the Master and those on board to conduct this most important function.

An interesting observation was made by Captain Mike Shuker in a paper he presented at the INMAREST Conference in May 2002 when he drew attention to a list of issues which he suggests are not adequately provided for in the ISM Code itself:

- Who should carry out these internal audits
- The frequency of the internal audits
- Who is responsible for overseeing the internal audits
- Who allocates the non conformities raised during internal audits for corrective action
- Who verifies the corrective action plan
- How corrective actions are verified. (Shuker)

No doubt some would argue that the ISM Code expects each Company to decide itself how such matters are dealt with in that particular Company and that these items will be dealt with quite differently by different Companies.

In practice there would appear to be some serious concerns being expressed about the way that auditing techniques are being developed. A Chief Officer put it quite simply in the following terms:

*The paper mountain generated – where will it stop!
During audits, auditors seem only interested in correctly completed
forms and certificates. Very rarely checking any of the physical systems.*

In addition to the company's own 'internal auditors' – there may be many more third party auditors attending on board. They may be representing flag State Administration / Recognised Organisation, Port State Control, Charterers and many other categories. The operations manager from one shipping company seems to hold some very strong views about these auditors and the ISM Code:

...The ISM Code has only created a new industry or profession of ISM Auditors who are, more often than not, arrogant. They stride into the owners or managers office once a year for annual audits asking incompetent questions to persons who have been working for decades in the profession...

Certainly the auditor should not adopt an arrogant attitude and it is unfortunate that this ship operator had encountered such a bad experience. An auditor who is doing his / her job properly will be acting as a facilitator and helper to the company and the findings used in a positive way within the cycle of continual improvement.

4.5 A 'no-blame culture

The idea of a 'no-blame' culture is seen by many as a crucial factor that needs to be developed if the fruits of the ISM system is to reach full maturity. It is amongst the most difficult of all aspects of ISM implementation to achieve. In some ways it seems to run contrary to our natural human instincts and the culture we have been brought up in. If we do something wrong we expect to be punished. As children at home, or at school perhaps, if we kicked our football through a glass window we could predict, with a fair degree of certainty, what the consequences would be if we were caught. If no-one had seen the incident and there was nothing to link us to 'the crime' – and if we thought we could get away with it – we may look the other way and pretend we knew nothing about it. It is a matter of self-preservation. A 'no-blame' culture would take us beyond the punishment factor – although that does not mean diminishing the responsibility factor – we would still be expected to pay for the replacement window (or at least make a contribution towards it). The 'no-blame' culture would anticipate the incident being used as a learning opportunity. Why did the window get broken? What could be done to prevent a recurrence? What would be the consequences of making changes to avoid a recurrence – i.e. it forms part of a risk management exercise. If we were not provided with that learning opportunity then we continue to have broken windows.

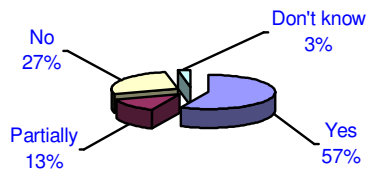
Most people have been so conditioned by the 'blame culture' they really have difficulty even believing that anything else could possibly work. In addition, even if they did move into such a culture could they be certain that their superiors, who perhaps had the control of their careers and jobs in their hands, were also fully committed to that 'no-blame culture'. These fears were echoed by Stuart Witherington

of the MAIB in a paper he presented at the IMAREST Conference in May 2002 when he said:

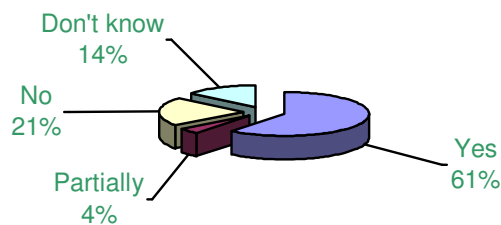
'...society's blame culture instils into managers and seafarers a fear of blame and criminalisation. It encourages mistrust, preventing them from being open and honest, by covering up mistakes when things have gone wrong. Further, it can give a sense of anxiety to individuals who think that by taking personal responsibility, they may be held responsible for an accident simply by following the dictates of the ISM Code...' (Witherington)

Of the limited number of Safety Management Systems which the author has seen which are working very well – they will invariably be a long way down the road of having developed a 'no-blame' culture. From the authors own first hand experience a no-blame culture is quite rare and takes a long time to cultivate. It was quite a surprise therefore to review the findings of the survey when a majority of respondents, both Seafarers and Ship Operators office staff said that their companies really did operate a no-blame culture.

**Does the Company operate a 'no-blame' culture? -
Seafarers perception**



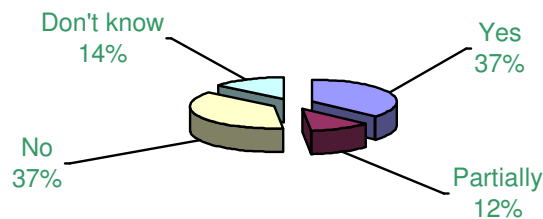
**Do you operate a 'no-blame' culture? - Ship
Operators**



In fact the results from this question, and the next relating to the 'safety culture' were very difficult to reconcile with other answers provided for example in the sections dealing with reporting accidents, hazardous occurrences and near misses as well as many of the narrative comments generally.

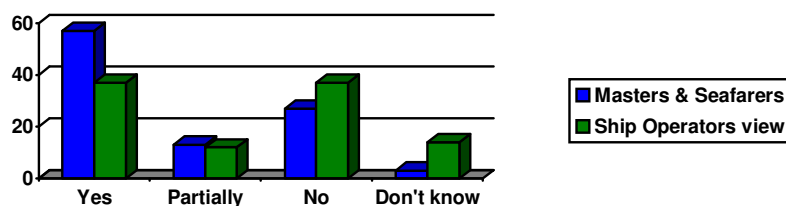
Interestingly, the questionnaire not only asked the Ship Operators whether they believed that they operated a 'no-blame' culture but also asked them to try and predict how their seafarers might answer that question i.e. do the seafarers believe that the company really does operate a no-blame culture. The following graph shows how the Ship Operators responded to that one:

Do your seafarers believe you operate a 'no-blame' culture?



The scepticism of the Ship Operators would appear to have been a little over pessimistic. This can be seen if we compare the actual responses from the seafarers alongside the perceptions of the Ship Operators.

Does the Company operate a 'no-blame' culture - A comparison of views



These differences of perceptions between what the Seafarers seem to think and what their managers and superintendents ashore believe they think arises on a number of occasions during this study. The predictability of the differences of perceptions would probably point towards a problem with communications.

We will re-examine whether seafarers really are working in a 'no-blame' culture in the next chapter.

4.6 A 'safety' culture

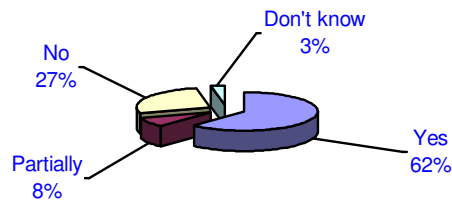
Sitting side-by-side with a 'no-blame' culture is the idea of a 'safety-culture' – these could perhaps be thought of as the two supports for the SMS. If one support is not stable and strong or otherwise crumbles then the SMS cannot stand and will also crumble.

In his address at the 25th annual World Maritime Day on 26th September 2002 – the Secretary-General of IMO also stressed the importance of this issue in the title of his paper: 'Safer shipping demands a safety culture' (IMO Briefing 26 Sept 2002). Mr O'Neil drew attention to the fact that rules and regulations are not in themselves sufficient where safety and environmental protection are concerned. "Although the behaviour of individuals may be influenced by a set of rules," he said, "it is their attitude to the rules that really determines the culture. Do they comply because they want to, or because they have to? To be truly effective in achieving the goal of safer shipping, it is important that the shipping community as a whole should develop a 'want-to' attitude."

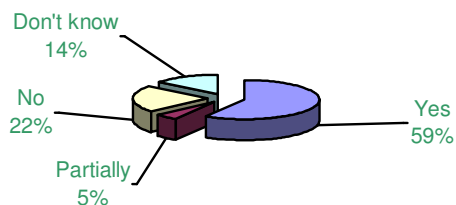
It is difficult trying to explain in words what is actually meant by a 'safety culture' – perhaps the most concise description known to the author is: '...the raising of safety to the highest priority...' An interesting definition has been provided by Professor Jim Reason, who was possibly quoting a source from the CBI, who suggests that it is

'...the way we do things around here...' (Reason P.173) The Health and Safety Executive of the UK provide a somewhat more technical definition: '...safety culture of an organisation is a product of individual and group values, attitudes, competencies and patterns of behaviour that determine style and proficiency of the organisations safety programs...' (HSE) What this means in practice is making sure, on every occasion, that the safety issues are considered and appropriate steps taken before undertaking any task or operation. If, having conducted such a 'risk assessment' the conclusion is that the task cannot be undertaken safely in the existing circumstances then it is not allowed to take place. Combined with the 'no-blame' culture – which would remove the pressure when taking such decisions – the probability of accidents occurring will be reduced considerably. If we think about how many accidents are caused because we 'cut corners' or 'took risks' because we believed that 'getting the job done' was more important than 'getting the job done safely'. Often the reasons were because of actual or perceived pressure / threats from our superiors. For example a ship is operating on a tight sailing schedule – the Master and the Mates have not had any rest for 36 hours but the ship must sail to maintain its schedule. An assessment of the situation would quickly identify that the Master and Mates are tired / fatigued and it would pose a significant risk to allow them to navigate the ship to its next port. Within a 'safety and no-blame culture' options would be explored but if the risk was high then the decision to delay the sailing until the Master and Mates had been rested would be taken without hesitation and without fear of repercussions. Some ship operators, and indeed seafarers, would find such a suggestion quite unrealistic and quite outrageous – the answer to them is surely that if you think suffering the losses involved in failing to maintain a schedule will be expensive – try having an accident! Without doubt the development of a true safety culture, like the no-blame culture, will require a lot of time, effort and hard work to achieve. Many long established and inbuilt prejudices will need to be overcome – it really will involve a major culture shift. It was a further surprise to see that again a significant majority of both Seafarers and Ship Operators seem to believe that they do work within a safety culture:

Do you work within a 'safety culture'? - Seafarers



Do you work within a 'safety culture'? - Ship Operators

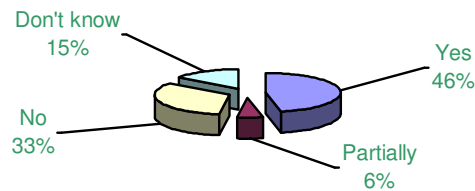


Again these answers do not seem to sit at all comfortably with other answers given elsewhere in the questionnaire and the narrative comments received. It is suspected that the respondents in answering these questions were perhaps indicating that, in their

view, they worked in a reasonably safe manner but does that really extend to feeling confident that the ship's schedule can be interrupted if it was felt necessary to allow the crew to be rested? If it does then full implementation of ISM is probably closer than the author might suggest is the case in the Concluding Chapter of this book.

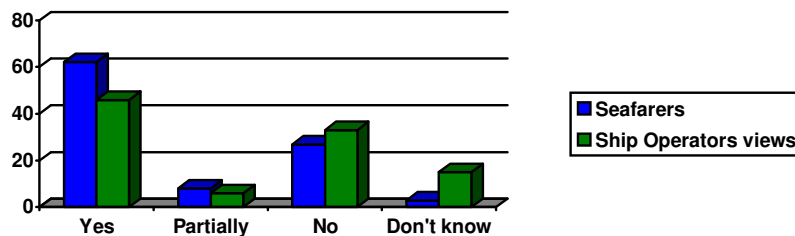
A similar exercise was carried out with regard to asking the Ship Operators about the safety culture, as it was with the no-blame culture i.e. they were asked not only for their own views but also how they thought the Seafarers would answer that question. Again the Ship Operators were perhaps a little cautious and sceptical about the seafarers perceptions and views about a safety culture;

Do Seafarers believe you operate a 'safety culture'?



Again to appreciate these perceptions in perspective it would be useful to compare them side by side:

Safety Culture - A comparison of views



The IMO have recently been highlighting the importance of developing similar ideas:

In order to promote a no-blame culture the suggestions of the Committee to Member Governments was to:

- *review their regulatory and safety regime with a view to encouraging the reporting of near misses without fear of reprisal or punitive action;*
- *urge companies operating ships under their flag not to penalise persons reporting near misses; and*
- *urge companies operating ships under their flags to implement procedures by which persons should only report near misses to the designated person or persons and the designated person or persons should only pass on such reports in an anonymous form.*

[IMO MSC/Circ.1015]

Some of these issues relating to the development and implementation of no-blame and safety cultures will be considered further in subsequent Chapters.

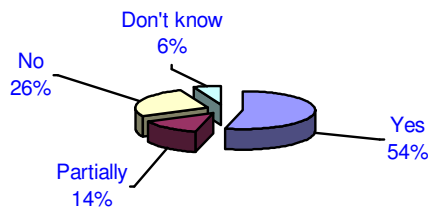
4.7 Ownership of the SMS

Another factor that many believe to be crucial to the possible success of an SMS is the idea that those who are most closely involved in its implementation should develop a sense of ownership of the system. This is a very strong motivational factor.

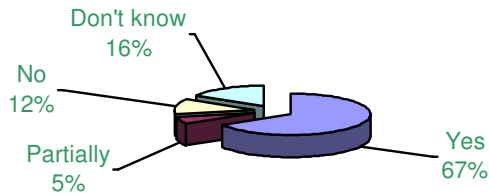
If a 'ready-made' system is presented to the ship then there will be an immediate risk of engendering a sense of alienation, rejection and probable resentment. They will probably be perceived as yet another set of rules and regulations, along with a whole lot of paperwork, which is again being imposed on those on board. On the other hand if the system is devised with the active participation of those on board then it will engender a sense of identity and purpose. Those who will be involved in the implementation process will have had some say in its development. It will be 'their' system and they will, as a natural consequence, want to make it work. It has perhaps not yet occurred to some but the people who will benefit most from a properly implemented SMS will be the seafarers themselves.

When asked whether they felt a sense of 'ownership' of the system the two categories of respondents were actually quite positive:

Is there 'ownership' of the SMS - Seafarers

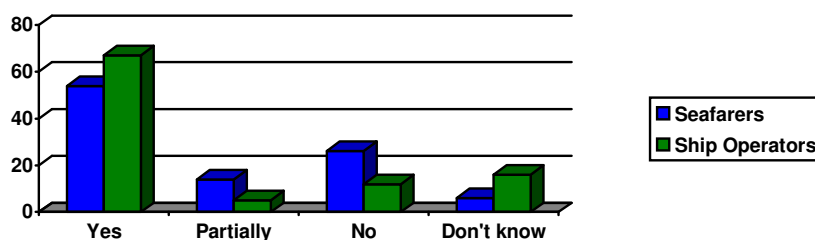


Is there 'ownership' of the SMS - Ship Operators



These responses also do not sit comfortably with the narrative comments received and other answers given elsewhere in the questionnaires. However, on the face of it, the perceptions of the Seafarers and the staff ashore seem to coincide quite closely as can be seen in the comparison below:

Is there 'ownership' of the SMS - A comparison of views



A sense of ownership of the Safety Management System can only come from an active participation and involvement in the system. Where there is such active participation then the results are clear to see. It really should come as no great surprise to find that when the sea staff themselves have been actively involved in the development of the SMS that it stands a very good chance of achieving success. The converse is almost certainly true. On the positive side there were some excellent illustrations submitted of how that sense of ownership was bearing fruit. It could not be expressed more clearly than the following received from an Australian Master:

“The SMS within the Company was developed by seafarers, for seafarers. The vessels feel a great sense of ownership because the procedures and work instructions, checklists etc. were all developed by the ships staff. This is indeed an enlightened approach and gives the ships officers a sense of ownership and relevance.”

A great sense of pride and achievement can be gained on the road to developing that sense of ownership. For most companies there was actually little that was new with the ISM Code – they already had good safe procedures in operation within the company which had been developed over many years. The main difference was that now those good safe procedures would be written down in such a way that everyone in the Company could follow the same procedures in a consistent way. It is not difficult to empathise with those who prepared their procedures manuals in this way when they reflected and realised that they had been involved in developing and running some pretty good procedures and that now they were going to have the opportunity of passing on their knowledge, skills and experience to others through the Safety Manuals. A little of that sense of pride and achievement can be detected in the following report from a US Master:

*“Our Safe Management Plan was written by seasoned mariners who worked for this company by collecting processes from ships. Every possible process via educating officers to use flow diagrams – this information was consolidated and became our safe management system.
I was one of those who contributed.”*

Not only must the ‘old hands’ feel that sense of pride and ownership – it must involve staff at all levels both on board ship and ashore and in every type of organisation. We may naturally think in terms of bulk carriers or tankers where there is a greater propensity for the relatively small ‘team’ who will be together perhaps for six months or more at a time on relatively long sea passages with relatively few port calls to co-operate and work at developing the safety culture and the sense of ownership of the system. What about other craft though – maybe a fast-ferry operation – involving very frequent port calls with relatively very short sea passages between ports. Can an SMS really work on board such craft? Can any sense of ‘ownership’ of the system be developed? Clearly it can and one Danish Master makes the point very clearly:

*“The following has been my own way to succeed with the implementation and maintenance of ISM in a fastferry company in frequent service carrying more than 1,5 mio pax per annum.
It is essential that the ISM system is designed and implemented in cooperation with all groups of ship/shore personnel and management. The staff must end up with a clear feeling and pride*

*that this is their system. They made it...
Reporting procedures are the backbones of the system. Internal audits performed by inter-department staff must be scheduled for the full year and the schedule must be kept. The audit report must be published in full for everyone to learn from others mistakes. Policies and procedures must be reviewed in planned intervals and brush-up training in system management should be performed on regular basis."*

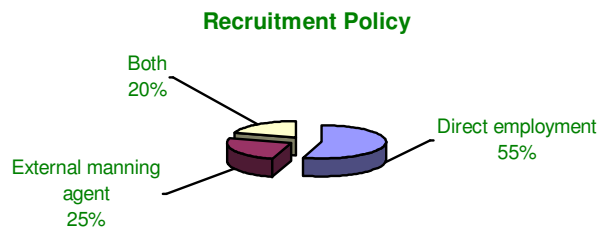
Whatever the ship type, whatever the operation might be – the feedback received clearly demonstrates the need for the development of that sense of ownership of the system and a clear understanding of how that sense of ownership is achieved.

Additional questions relating to the significance of 'ownership' will also be considered further in the following Chapters.

4.8 Recruitment policy

To complete a review of this section of the questionnaire – there was one further question that the Ship Operators were asked to answer and that related to their policy with regards to recruitment. This was requested to allow the author to consider whether there might be any connection between recruitment policy and attitudes towards ISM

The results show that the majority of Ship Operator respondents were involved more in employing their staff directly or through their own captive manning agents rather than using external recruiting agents.



During the latter part of the 1990's and into the new millennium many companies recognised the mistake that had been made in the past and realised that they again needed to start developing those vitally important 'bonds' between employer and employee. The way in which manning agents are used in some companies can inhibit the possibility of such bonding taking place.

The Ship Operators recognised that there most definitely was a correlation between the employer / employee relationship and a well run / safe ship. Unfortunately others are taking a little longer to realise this very important, fundamental, fact. Others recognise it but need persuading of its significance. A Mexican Chief Officer explained his experience in the following way:

"Training on ISM is an important matter sometimes neglected by the company as most of the time they worried about the evidence that the

person went throughout the familiarisation on the subject, an easy exam and that's forever...

- no further interest on effectiveness of the system is checked or evaluated, only those which can be audited or required by the certified body (Class).

keeping a permanent or continuous seastaff is also difficult as the company has officers and ratings going and coming and in this way you lose continuity on the purpose of maintaining a 'safety culture'.

- It is important that everyone considers the importance of the ISM Code and SMS even when the economic part plays a role on the decision process."

The employers themselves also recognise the importance of continuity of employment and some of the implications and significance was explained by the following Swedish Operations Manager:

"High turnover prevents SMS to work efficient. Training in basics is ever ongoing and never completed because it has to start all over again. Crews are too small to enable training on SMS, occupational work and do the work properly at the same time. Crew from manning agents not always taking company goals and objectives to their heart because they will be gone after a few trips. Lack of ownership because short employment.

Others with long term employment recognise however the importance of a functional SMS because it makes their job easier by providing routines and the basis to train the newcomers."

Swedish Operations Manager

Not only is the continuity of employment issue important in itself – to provide a 'bond' between employer and employee – it is also vitally important from a pragmatic and very practical reason, within the context of ISM, because people then have an opportunity of becoming familiar with one working system. Through that familiarisation they stand a chance of really making the SMS work – which would mean, at the end of the day, that ships really would get safer and seas really would become cleaner!

It is almost inconceivable to think of any other industry where the owner of a plant, worth many millions of dollars, would hand over the management to individuals who were engaged on a 'casual labour' basis but that seems to be exactly what some people in the shipping industry did, and some continue to do. The ISM Code is, in many ways, a reaction to those unbelievable practices.

The importance and full significance of having a clear formal policy on recruitment practices within the company will be made very clear when the recent court decisions are examined in Chapter 7.

5 Reporting accidents, hazardous occurrences and non-conformities

The reporting of accidents has been quite a normal occurrence for many years and for certain accidents it has been mandatory to report. The Flag State Administration or the Port State may have a requirement and they may have specific forms that need to be completed and particular aspects that they require recording in the accident report – particularly if personal injuries are involved or pollution has occurred.

Under the U.K. Regulations, Masters and Skippers of fishing boats must ensure that the circumstances of every accident and serious injury are examined. Under the Merchant Shipping and Fishing Vessel (Health and Safety at Work) Regulations 1997 (SI 1997 No. 2962) the safety officer should conduct an investigation and the results must be sent to the Chief Inspector of Marine Accidents at the Marine Accident Investigation Branch (MAIB). Reports of accidents must be reported within 24 hours by telephone, fax, telex or e-mail, and reports of serious injuries must be sent to the MAIB within 14 days, using the quickest means possible.

The Classification Society may also require certain accidents to be reported – particularly if the hull of the ship or its machinery has been damaged. The ship operators are likely to require accident reports – particularly if the accident is likely to lead to a claim either being made against them or a claim that they may need to make against their own insurers. Many of the accidents would be analysed although often the extent of the analysis and investigation would only go so far as establishing where legal liability might rest. That said however, there have been a number of ship operators who have looked for causes of accidents as part of a process of trying to learn from those events and implementing some form of corrective action to prevent the same event happening again.

The ISM Code does devote an entire section to reporting not only accidents but also hazardous occurrences and non-conformities. The requirements are set out in Sect 9:

REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURRENCES

9.1 The SMS should include procedures ensuring that non-conformities, accidents and hazardous situations are reported to the Company, investigated and analysed with the objective of improving safety and pollution prevention.

9.2 The Company should establish procedures for the implementation of corrective action.

For the requirements of Section 9 to be complied with fully the author believes that the concepts of ‘safety culture’ and ‘no-blame culture’, which were discussed in the last Chapter, must have been developed to a fairly advanced stage. It is also the view of the author that if Section 9 is being complied with properly then there is a very good chance that the rest of the SMS will also be working well. Of course the proactive side of the SMS, utilising risk assessment tools, is very important – it is when the point is reached where ‘near misses’ can be comfortably and confidently reported, analysed and steps taken to implement corrective action that the SMS is clearly alive and dynamic. In 2001 IMO published a detailed paper under MSC/Circ.1015 ‘Reporting near misses’ – which highlighted the importance of this level of reporting.

It was Section 9 of the Code therefore which was to be the focus of the survey and which the author believes will provide a clear, and reasonably objective, insight into the current status of ISM implementation.

The survey not only attempted to establish which types of incidents were reported, and how many, but also the extent to which these incidents were analysed and any lessons learnt fed back into the system – within a cycle of continual improvement. It also attempted to establish whether there might be any reasons why people might be reluctant to report incidents. If there was then clearly such inhibitions could act as a brake to advancing the development of safety on board.

An Indian Engineer put forward a very positive picture:

ISM Code has drastically reduced the number of accidents, raised the standard of ships. Near miss reports are a valuable guideline to the ships personnel. ISM Code can eliminate the sub-standard ships. It will ensure safety of personnel, ships and cleaner seas

It should also be recognised though that there is a very real possibility that both companies and individuals might not actually understand the basic principles of reporting incidents other than actual accidents. A Classification Society Auditor has touched upon this important issue:

“Although most of the companies are doing their best to improve their safety and pollution prevention systems, people on board are not fully familiarised with reporting NCN, accidents, etc. maybe because they don’t have a clear idea of how to, and they feel that it represents extra admin work, which if not properly managed could give them more problems.

I have also noted that there is confusion for both internal auditors and persons on board in distinguishing between a NCN and a technical deficiency.

The most serious problem that I have seen is the lack of understanding of the real meaning of ‘corrective action’ normally because investigation and analysis of NCN is not adequately carried out, the instinct being to choose an ‘immediate solution’ to avoid spending further time on the subject

An Indian Pumpman made a very important point which is worth thinking about for many could perhaps learn an important lesson about investigating and analysing incidents:

The reports of accidents on board should be made by enquiring about it from everybody on board and not only the heads of the departments. According to me this will bring out the proper picture of the accidents

5.1 Which incidents are reported?

The questionnaire adopted a position whereby it treated the incidents to be reported as falling into the three broad categories as stated in the heading of Section 9 of the ISM Code – i.e. accidents, hazardous occurrences and non-conformities. In an attempt to obtain an impression of the general attitude towards reporting the questionnaire asked the respondents to state, initially, what level of incident was reported for the three different categories. The respondents were given four options to identify the level of reporting:

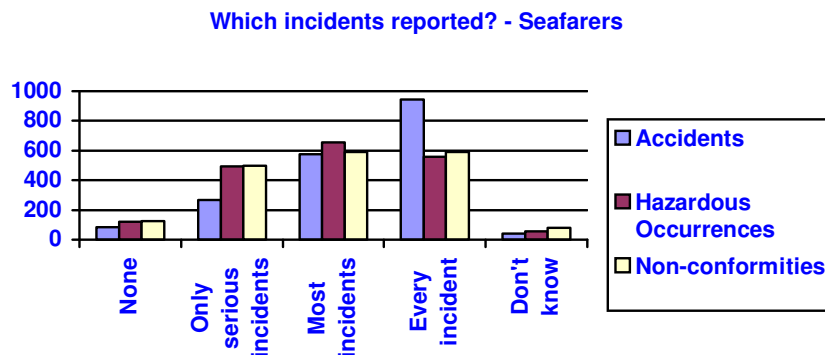
- Every incident was reported
- Most incidents were reported

- Only serious incidents were reported
- None – i.e. no reporting took place

The respondents could also choose a 'don't know' option. Some respondents chose not to identify any preference.

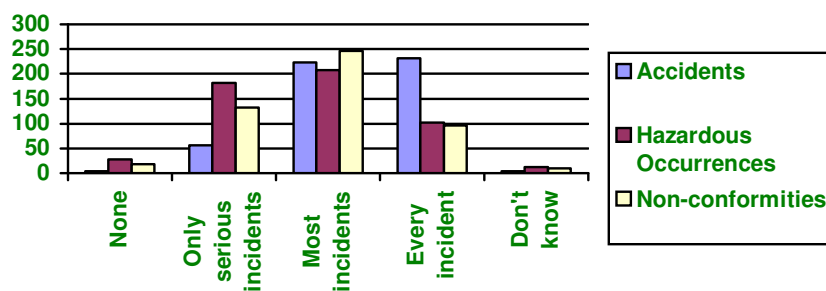
For some individual respondents their answers may be very precise and to that extent objective – for example if it is the Master or Safety Officer who is completing the questionnaire then they should know exactly what they report. If it is some other member of the crew then their opinion may be based on what they have been told by someone else or otherwise be a perception, although given in good faith, and thus be subjective in nature. It is very important to realise that the responses provided by the 'Masters and Seafarers' and the 'Ship Operator' categories should contain reasonable 'first hand' answers or at least be close to the factual situation whereas the 'Other Stake Holder' category is almost certainly going to be expressing an opinion as to what they think the situation is. There is nothing wrong with that of course, since this category has the potential to adopt an impartial observer status, but it is necessary to keep that in mind when reviewing the graphs and considering the findings.

The graphs below show the responses from the three different respondent groups to the three categories of incidents – the graphs are colour coded in accordance with the established convention.



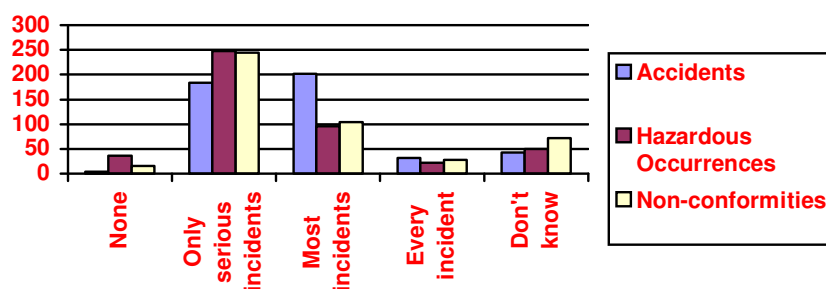
Although every accident should be reported it would appear that the seafarers are being honest and recognise that perhaps not every accident that occurs really is reported. However, the vast majority claim that if not every accident then at least most accidents are reported. It is of concern though that over 250 seafarers indicated that only serious accidents were reported and 87 stated that accidents were not reported. Interestingly a very significant number of seafarers indicated that every or most hazardous occurrences and non-conformities were being reported. This is very important and its significance will be considered presently.

Which incidents reported? - Ship Operators



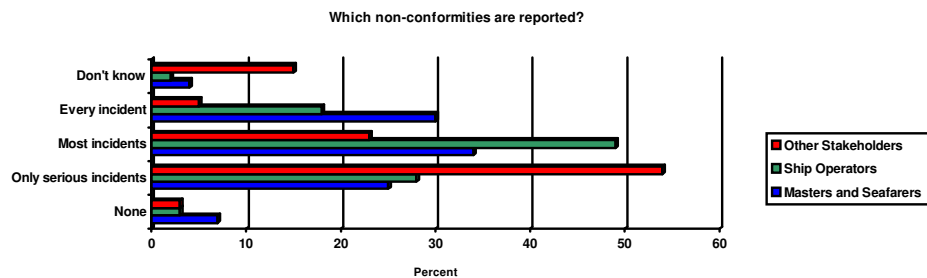
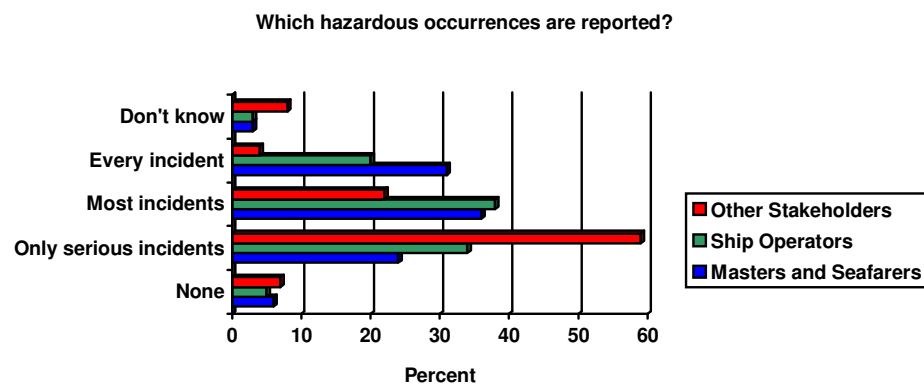
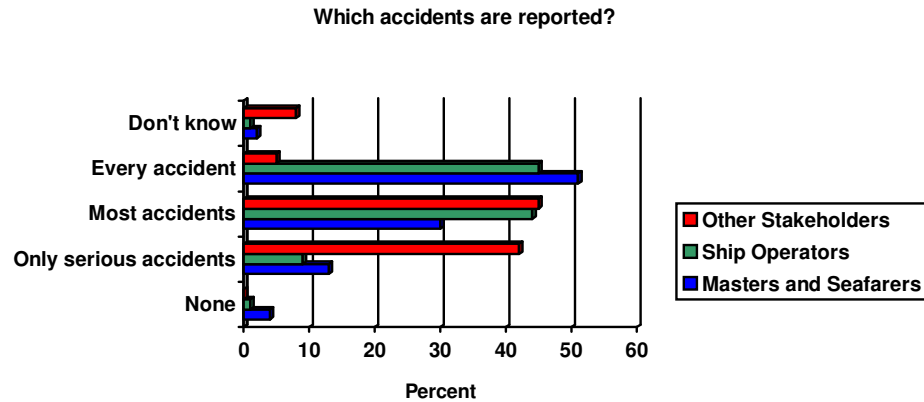
The Ship Operators seemed less convinced that every accident was being reported but were satisfied that most were. They were even less in agreement that every hazardous occurrence and non-conformity was being reported when compared with the seafarers submissions. Whilst they indicated that most hazardous occurrences and non-conformities were being reported they were starting to tend towards only the serious incidents end of the scale.

Which incidents reported? - Other Stake Holders



The Other Stake Holder category produced a very interesting perspective. It is important to remember that what is being reported here is the individual's perception of the situation rather than being based on any factual evidence. Very few respondents in this category believe that every accident is reported and only about 50% of the remainder believe that even most of the accidents are reported. Few seem to believe that there is any significant reporting of either hazardous occurrences or non-conformities. Understandably a larger number of this category registered that they did not know.

It is when these findings are compared side-by-side, and expressed in percentage terms, that something very significant starts to appear:



The responses from the Seafarers and the Ship Operator groups were not too far apart in their perception of which incidents were being reported but the 'Other Stake Holder' category had formed a very different view all together. Why there might be such big differences in perception will perhaps start to become clear as we progress through this analytical process.

Before we consider 'how many' incidents are reported it is perhaps worth reflecting upon an observation submitted by a Filipino rating on 'which' incidents are reported:

Most officers report unpleasant incidents, occurrences or near misses if it's the crew or ratings fault but indeed they are directly responsible.

If it's their own fault they just make up for it or put it in writing in case port authorities come on board.

In my own observations and experiences some vessels (including my present vessel) has already implemented ISM and with valid SMC but they don't follow it religiously or honestly. Instead they just file it and make it ready for inspectors or Port Authorities. It's only for formalities sake

5.2 How many incidents are reported?

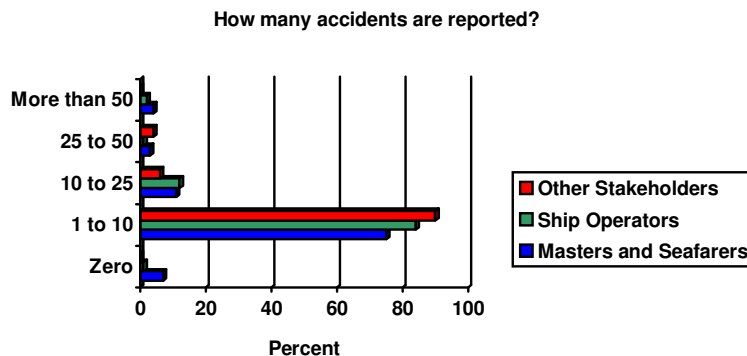
The next question in the questionnaire asked the respondent to indicate how many of the different types of incidents were reported each year per ship. Again the degree of objectivity within the answer would clearly depend upon the actual knowledge of the individual respondent. No doubt the Master and Safety Officer and DP ashore would have a very accurate figure available whereas others might be guessing – although on the basis of their experiences on board.

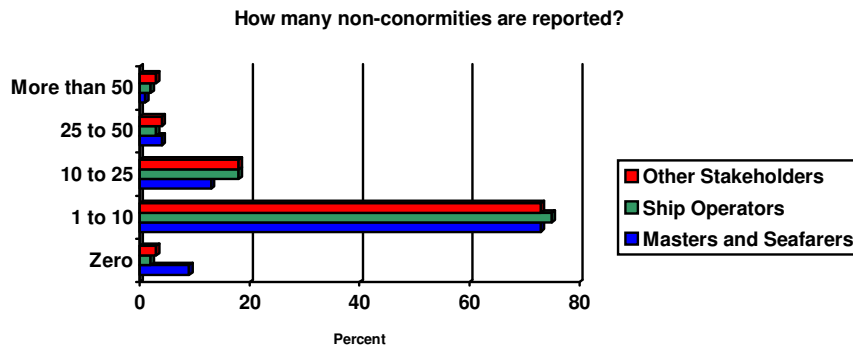
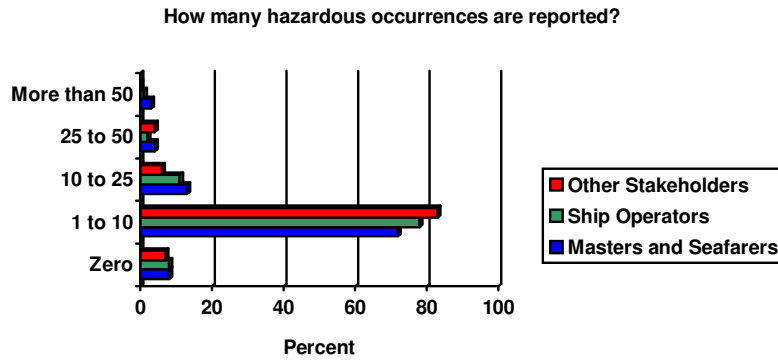
Because of the way the database had been set up it was not possible to allow respondents to choose a specific number – rather they were given a choice from a range of options as follows:

- Zero
- 1 – 10
- 10 – 25
- 25-50
- More than 50

And of course a 'don't know' option.

There was a considerable degree of agreement between all three groups and therefore individual group analysis results have not been reproduced here. Rather the comparative results, in percentage terms, are shown for each category of incident.

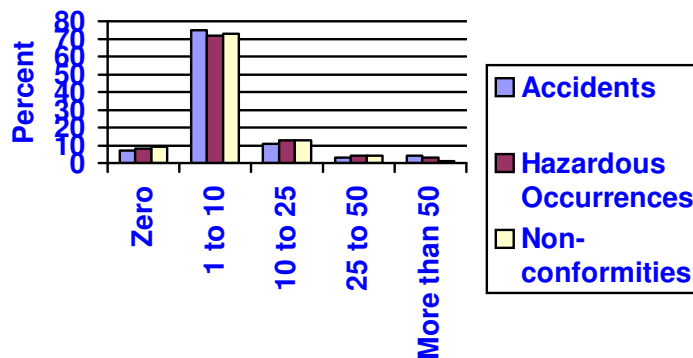




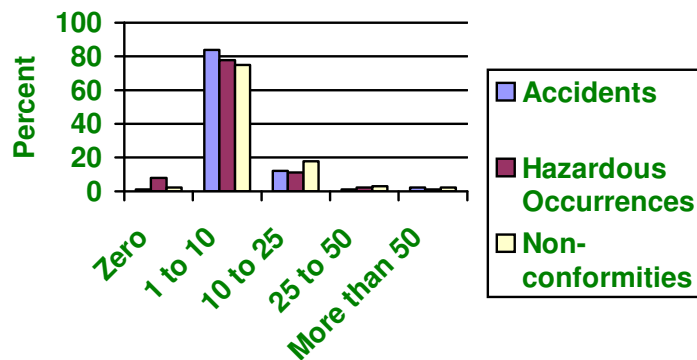
Approximately 80% of all respondents seemed to be in agreement that between 1 and 10 accidents, hazardous occurrences and non-conformities were reported from each ship each year. There was a slight increase in the numbers of hazardous occurrences and non-conformities reported

When we compare these results we can see that the numbers of accidents, hazardous occurrences and non-conformities were almost all falling into the 1 – 10 reported incidents per ship per year.

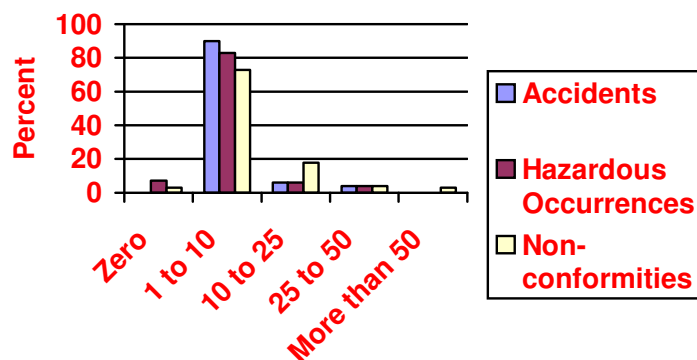
How many incidents - Masters and Seafarers



How many incidents - Ship Operators



How many incidents - Other Stakeholders



The indications are therefore, at least according to the Masters and Seafarers and Ship Operators that most / all accidents, hazardous occurrences and non-conformities are being reported and that there are between 1 and 10 of each type of incident being reported each year per ship.

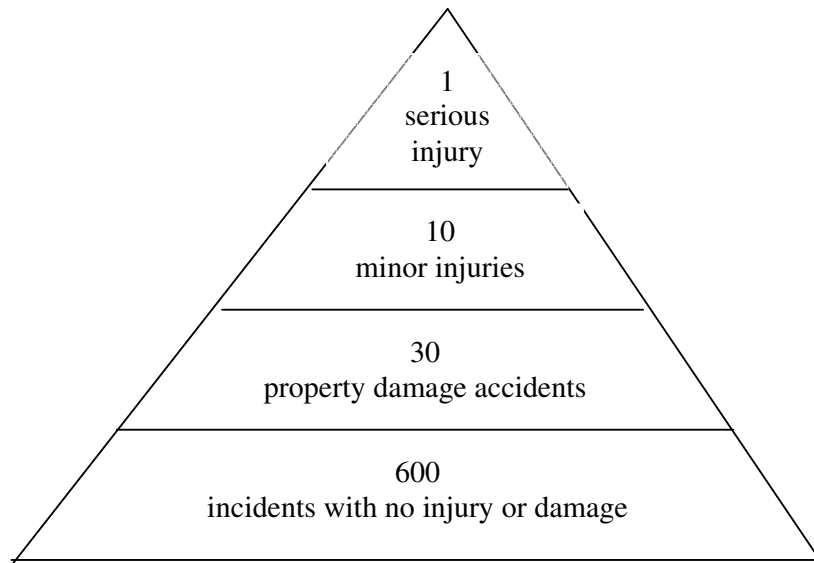
This is perhaps a good opportunity of considering the theory behind the 'Accident Pyramid'.

5.3 The accident pyramid

It has been recognised for many years that there seems to be a clear relationship by way of a ratio between the number of major incidents, the number of minor incidents and the number of near-misses. Indeed it is this principle that is applied when, for example, the terms of insurance on a car are proposed. Usually there will be an 'excess' or 'franchise' – typically the first £100 – which the insured will bear before the insurance company becomes involved. The reason is that the car insurance company will have conducted a risk assessment and concluded that the majority of

accidents tend to be small in nature – i.e. below £100 and they would prefer not to cover those smaller, frequent, accidents. The larger the excess the individual is prepared to accept – the lower will be the premium. The reduction in premium though is not at all linear, the curve is closer to being exponential in shape, which reflects the general idea of the probability of serious accidents compared to smaller type incidents.

This idea has been frequently illustrated as an isosceles triangle or pyramid shape. There are a number of versions of the so called ‘accident pyramid’ or ‘safety pyramid’ – a typical example is shown in the figure below:



If this pyramid or triangle theory is correct then we should expect to see significantly more hazardous occurrences and non-conformities than actual accidents. The survey results do not appear to support the theory – the numbers of accidents, hazardous occurrences and non-conformities all appeared to be equal. Even allowing for the fact that the numbers involved were a little vague i.e. somewhere between 1 and 10 – there still seems to be something not quite right. There are at least two possible explanations:

1. the pyramid theory is wrong
2. the ‘other stake holders’ were right and the Seafarers and Ship Operators were not reporting all hazardous occurrences and non-conformities

Whilst it may be the subject of some debate and disagreement as to exactly how steep the slope might be on any particular accident pyramid – few would challenge the general principle. A clear understanding of the implications of the accident pyramid must be understood if the full significance of reporting hazardous occurrences and near misses is to be fully appreciated.

It is suggested that it is infinitely more cost effective and efficient to encourage near-miss reporting and transcend the current blame culture. It is perhaps worth exploring therefore a little more of what is involved in near-miss reporting.

5.4 Causal chains

There are a number of theories about causation – the traditional view is that a causal chain can be identified whereby one event is the cause which leads to an effect and that effect then becomes the cause of another effect and so it goes on – cause – effect, cause – effect. The author believes this is too simplistic, and a somewhat misleading explanation – rather any major incident is the result of a whole series of multiple causal factors – small chains – all coming together at one particular geographical location at a particular point in time. The interruption of any one of these multi-causal events would prevent the particular incident happening when or where it did. It may be that the occurrence of the major incident had only been postponed and therefore it is crucial to ensure that the remedial steps taken are significant in nature to reduce to a minimum the probability or possibility of the incident becoming an inevitability.

Hazardous occurrences or near-misses, which constitute the base of the accident pyramid, occur much more frequently than more serious accidents. They are also smaller in scale, relatively simpler to analyse, and easier to resolve. Usually each major accident can be linked to a number of incidents that happened earlier. Therefore, by addressing these precursors effectively, large and expensive accidents may be avoided.

The proposition is that if it were possible to examine and deal with the large number of incidents, or near incidents towards the base of the pyramid then the probability of occurrence of the serious incidents at the peak would be reduced considerably. The suggestion is that serious / major accidents do not just happen in isolation – they have causes which can be identified. Frequently, following a major incident, there will be an inquiry of one description or another – depending just how serious the incident was. With the benefit of hindsight it is usually possible for the investigators to identify a whole series of causal factors, frequently developing over a lengthy period of time, that eventually led to the major incident occurring.

It has been difficult obtaining details of cost involved in the formal investigations – the National Audit Office were receptive, kind and helpful but did not have any figures. Through the offices of the MAIB it was possible to establish that the cost to the British Government – or the British Taxpayer depending upon how you may wish to look at it, - of say the Derbyshire investigations up to and including the re-opening of the Formal Investigation are estimated as totalling between £9,000,000 and £10,000,000, including legal fees. The Bowbelle and Marchioness incident, including the current Formal Investigation, is estimated at some £6,000,000, including legal fees.

The author would suggest that we do not need to wait for these major incidents to occur. Invariably warning signs would have been flashing up in advance of the incident actually happening. These warning signs are causal factors starting to influence events. All the causal factors have not yet come together at the same point in time in the same location. The causal factors are manifesting themselves as hazardous occurrences, near misses, non-conformities etc. We can actually explore and examine these causal factors by investigating and analysing them. By identifying and dealing with them, by applying corrective actions they are removed from the equation and the major incident will be avoided. It is suggested that this has surely got

to be an infinitely better method of dealing with incidents than waiting for the major disasters to occur – with substantial loss of life or major pollution. That is why it is so important that near misses are identified for what they are and taken very seriously

A ‘near-miss’ is an event that signals a system weakness that, if not remedied, could lead to significant consequences in the future. As such, a near-miss is also an opportunity – an opportunity to improve system structure and stability, and an opportunity to reduce risk exposure to potential catastrophe. (Wharton)

If this theory is correct, therefore, it is possible to identify and deal with the causal factors before the major incident occurs. It is the hazardous occurrences, near-misses and non-conformities which are providing the warnings and opportunities to implement the necessary corrective action before lives are lost, pollution occurs or other losses are incurred.

5.5 Learning opportunities

The concept and reason for reporting not only Accidents but also near misses and hazardous situations, as is required by the Code, is very clearly explained and brought to life by an Irish Master who reported:

All accidents / near misses / dangerous occurrences are reported so that all the other vessels in the fleet can maybe benefit from our experiences and visa versa.

The majority of non-conformities can be dealt with on board quite soon and even these are promulgated throughout the fleet.

Another good example of the system working as it was intended was reported by a Finnish Master who has clearly moved far away from the ‘blame culture’ and would now appear to live in a true ‘safety culture’. He describes the system in his company in the following terms:

“In our ship, all accidents and incidents are reported. This is a standard procedure here and we have had no problems with that.

We are receiving monthly, "Lessons learned" reports from accidents / incidents, happened onboard our ships. These are also followed up very closely to avoid any further acc/inc. in the future.”

To a significant degree ISM is about transparency – transparency at a number of different levels including reporting of hazardous situations and near misses. To achieve the level of transparency required it will be necessary to address the issues in the very way in which the SMS itself is structured and also in developing the confidence of personnel that they can operate without undue fear of reprisals in an open and transparent system. A British Master reflected the sort of general ‘feeling’ that is needed to start moving forward when he stated:

I consider our system has promoted a more open approach to reporting incidents and the investigation and corrective action arising from such reports.

There is probably a natural reluctance on the part of human beings to report something if there is a risk that somehow that same individual is perhaps going to be punished, blamed or otherwise criticised for the particular event. If the cause of

accidents is to be fully understood and if accidents are to be prevented before they happen then it is crucial that near misses and hazardous situations are reported, analysed and dealt with. In different parts of the industry a variety of ‘incentive’ schemes have been introduced to try and encourage compliance with the ISM Code or otherwise to develop a safety culture.

Whether it be an Internal SMS Audit, or some other safety management audit by the ships own staff or some external body such as a Port State Control Inspector or Flag State / Recognised Organisation (usually a Classification Society) Auditor the opportunity will present itself for detecting non-conformities. The detection and recording of a non-conformity should not necessarily be considered as something bad or viewed in a negative way – it is basically providing a learning opportunity. For one reason or another the non-conformity is flashing a warning light that the system is not working as it was intended – or at least as it was defined or described in the written procedures. It may be that someone had misunderstood or misinterpreted the procedure – in which case some further training / familiarisation might be required. It maybe that the procedure itself was flawed in some way – in which case the corrective action may be to amend the procedure. It may be that an individual was deliberately refusing to comply and follow the procedure – in which case the individual would need to decide whether they would comply or otherwise they would have to face the consequences – which would clearly depend upon the severity of the non-compliance. It can be anticipated that even within the best structured SMS some problems will manifest themselves as non-conformities. That is fine – provided procedures are in place to pick up those non-conformities, to analyse them and determine why they had arisen and then to implement corrective action. In this way the SMS is the subject of a cycle of continual improvement – by a process of fine tuning the system will be getting better and better as time goes on.

Of course there will be varying degrees of seriousness applied to non-conformities. What are being discussed here can be described as ‘minor non-conformities’ although they may indicate the development of a potentially serious situation if remedial action is not taken.

A much more serious, and very different, situation arises when a major non-conformity is identified. A definition is provided which will perhaps help distinguish this occurrence from the minor category event:

- **Major non-conformity** means an identifiable deviation which poses a serious threat to personnel or ship safety or a serious risk to the environment and requires immediate corrective action; in addition, the lack of effective and systematic implementation of a requirement of the ISM Code is also considered as a major non-conformity.

For present purposes the focus will be upon ‘minor’ non-conformities. Within the context of the present discussion the important point to recognise is that non-conformities should be capable of being discovered through an audit process. Of course it may be possible to try and hide or disguise such non-conformities but an experienced auditor would probably discover irregularities which would certainly raise his suspicions.

It may be that some of these non-conformities do, in themselves, represent hazardous situations. However, through the audit process those hazardous situation would be discovered and dealt with. It is suggested that the hazardous situations referred to in Section 9.1 of the ISM Code are events different from the non-conformities.

Although the ISM Code itself does not mention ‘near misses’ – this expression does throw some light on the type of event contemplated by the term ‘hazardous situation’. It is the accident which nearly happened. If things had been just slightly different – a few seconds in time or a few centimetres in distance – there would almost certainly have been an injury or some other damage or loss. A *narrow escape* we might say or a *close shave* is another expression which might be used. One or two examples might help to explain not only the nature of the ‘hazardous situation’ event but also the very real problem associated with reporting such events:

Example 1. A seaman was assigned to paint some bulkheads on the outside of the accommodation. He couldn’t reach the upper part of the bulkhead and so he found a ladder which he leant against the bulkhead. As he started to climb the ladder the foot of the ladder slipped and he jumped off the second rung. He was not injured but a little paint was spilt.

Example 2. A vessel is on passage between the third and fourth loading port – it is 0230 hours and the second mate is alone on the bridge as the officer of the watch. The second mate had only managed to catch four hours sleep during the last two days because of rapid turn around in the load ports. He must have fallen asleep because when he looked up he saw another vessel crossing on his starboard bow about half a mile away. He immediately altered course and managed to avoid a collision.

In example 1 whilst the seaman might be somewhat embarrassed at being careless and not following correct safety procedures – he would probably recognise the sense in telling the bosun or mate what had happened and ensuring that a second man was assigned to stand by the bottom of the ladder and / or ensure the ladder was otherwise secured before starting to climb or indeed whether it was safe to undertake the job – maybe the ship was rolling excessively. Whilst it may seem somewhat extreme to consider preparing a formal report for such an incident – the point is that this could very easily have resulted in a very serious accident or even a fatality. If that seaman could make the mistake then others might also make a similar mistake – better that the lesson be shared with as many others as possible to remind them to follow the correct procedures. That dissemination of information would naturally follow a report and analysis. That, in simple terms, is the logic and philosophy behind ‘near-miss’ reporting.

Now, consider example 2. Is the second mate going to advise the Master of what has happened? If he did - how will the Master react? If the Master was advised and recognised that the second mate was suffering from fatigue, that he should not have been left in charge of a watch and certainly he should not have been alone on the bridge – is the Master going to advise the D.P. in the office ashore? If he did, how would the D.P. react?

If put in the position of the second mate and asked that question - it is suggested that the reaction of many in the shipping industry, both shore based and seagoing, if they were honest would probably be that they would keep quiet about the incident if they thought they could keep it a secret. Clearly what is being advocated – and indeed required by the ISM Code is very much the opposite. The reason is not difficult to understand.

If the second mate had not woken up when he did – maybe he slept for just two minutes longer – and maybe the second mate on the other ship was also not aware of the situation which was developing – the hazardous situation has possibly now become a major accident – possibly lives lost or personal injuries, pollution, explosions, serious damage to both vessels, maybe vessels sinking, damage to cargo

with consequent loss of time and earning capacity. In that case the facts would most likely come out in a formal inquiry and / or the subsequent investigations in anticipation of litigation or insurance claims. The fact that the second mate was seriously fatigued, that he was asleep and alone on the bridge would not only seriously prejudice the ship operators legal position but also have implications as far as the licence of the second mate and the Master are concerned.

If the second mate and possibly Master and whatever other mates might be on board are working such long hours that they are suffering from fatigue at this level and there are not sufficient seamen to ensure that an additional lookout is maintained then that ship is not safe – indeed it is unseaworthy. There is a very serious problem on board which needs addressing. The near miss was a warning signal – such an incident must be reported immediately to the DPA and immediate steps must be taken to remedy the situation. It is suggested that such remedial steps would not include dismissing or otherwise disciplining the Master and second mate but rather provide them with the additional resources necessary to operate the ship safely i.e. if it was intended to maintain a very tight loading schedule then to put on board additional qualified mates sufficient to ensure that excessive hours were not worked by any one individual and consequently that fatigue was not allowed to take hold. Also additional seamen may have to be provided on board to provide adequate lookouts. Maybe some ship operators would argue that such ‘luxuries’ cannot be afforded in the current depressed market conditions – the point is to consider the cost of the alternative!

The situation though is probably that the ‘culture of fear’ in which many seafarers seem to work would discourage them from reporting such an incident and take a risk that they might also get away with it a second time... The IMO has recognised the problem of the reluctance to report near misses and has issued guidelines on developing a ‘no-blame’ culture

As previously discussed.

Unfortunately there were a significant number of respondents who did not appear to have grasped the full potential value of accident or near miss reporting as a tool to prevent future incidents – indeed it would appear that the concept of a ‘safety culture’ may still be a little way off. For example the following passenger ferry Master seems to have resigned himself to the fact that accidents are inevitable when you carry large numbers of people and only very serious incidents could warrant the time needed to report:

“The figure of 50+ accidents must be viewed in the context of number of souls carried which on average is 3900 every day. Obviously we don’t expect to have corrective action reports for every minor sprain, burn and cut.”

Of course sympathy must be expressed at the potential dilemma of such a Master who will not have unlimited resources available. However, for so long as the attitude is maintained that these ‘minor’ accidents will continue to happen there is a very good chance that they will! Once the cause of these incidents is investigated and analysed then there should be a very real chance that something can be done to prevent further incidents in the future. Admittedly it will involve additional work initially but once the problem is addressed and corrective action put in place then the actual work involved will reduce to a ‘maintenance’ programme.

Another example of the nature of misunderstandings with regard to the purpose of near miss reporting can be seen from the following report from a British Master:

“Not all agreed on what constitutes a ‘near miss’ e.g. chipping hammer head coming loose and dropping off its shaft was promulgated as a near miss!”

Presumably from the way the Master has expressed his comment that he thinks such an incident is not a ‘near-miss’ and he seems to be suggesting that those who think otherwise have perhaps made a mockery of the idea. The author would suggest that such an incident is a very good example of a near-miss. The heads of chipping hammers should not come off! Presumably on the occasion referred to by the Master no-one was injured – but it could very easily have been otherwise. Surely, if the head of one chipping hammer has ‘dropped off’ it would make sense, good seamanship sense, to check the other chipping hammers to make sure none of the others are loose. To make sure that any defective hammers are repaired and made safe and to remind the Bosun, or whoever has the responsibility for such equipment, to make sure that they are regularly checked and that everyone who uses them are reminded to check them. Is that not just good seamanship – the way we had always worked? All ISM is doing is putting a little more structure into that good practice. If anyone was tempted to still say that we do not need such a formalised system then surely the facts of this case speak for themselves – that the informal system had, for whatever reasons, failed – the chipping hammer had not been maintained properly such that the head had been allowed to get to such a state that it ‘dropped off’. Fortunately, on that occasion no-one was injured – but a very important lesson can be learnt. Another observation was received from an Australian Second Engineer who was also not convinced that near miss reporting could serve any useful purpose. He had the following to say:

“I work in the E/R compartment where you use hand tools (drills, grinders etc), machine tools (drill press – lathe etc), welding machines.

The vessel moves – therefore we must move as well as carry out our work whilst using machinery. This in itself is dangerous – you can reduce the risk – i.e. correct PPE – ensure balanced – job held firm but still it is a hazardous work environment at all times. So to fill out near misses is pointless.”

Of course the Engine Room of a ship is, potentially, a very dangerous environment and when the ship is at sea the risk of accidents happening is increased even further. The hazards will always be there and proactive steps must be taken to reduce the risk of those hazards developing into actual injuries, pollution or damage incidents. However, an analysis of almost all the many accidents that do still occur in many engine rooms on board ships every year will prove that the incidents should not have happened – they could have been prevented if certain steps had been taken. Since there are so many actual injuries and other incidents every year it is suggested that there will be many more hazardous situations and near misses. If these are looked for, identified, reported, analysed and corrective action taken then they will help considerably to reduce the number of actual injuries and losses. The fact that someone works in a potentially hazardous environment should make them even more acutely aware of the risk of accidents happening and they should be looking even more closely for learning opportunities to reduce the risk. Reporting hazardous situations and near misses provides an excellent opportunity to do this in a structured way and also pass on such experiences to others who might also benefit.

Yet another example of this ‘misunderstanding’ which seems to exist in some quarters with regard to the nature and value of reporting and the potential for learning lessons was submitted by a British Master:

*“A lot of the C.A.R.’s (Corrective Action Reports) that stem from internal company ISM audits, are petty and serve no purpose to anyone.
C.A.R.’s are raised against ratings who remain completely baffled by the whole exercise.”*

Surely if the ratings ‘remain baffled by the whole exercise’ then something has gone very seriously wrong with the SMS in that company and in particular with communications, training and familiarisation on board that ship. The Master, and the Company he works for, really do need to look very carefully at the way their SMS has been set up, the provision of training and familiarisation – in particular how the SMS works, the crews involvement in its operation and the importance of reporting as a cycle of continuous improvement. They may well find, as other Masters and Companies have done already, that by providing leadership and involving the crew in the SMS they can make a very valuable and positive contribution.

The study from the Wharton School Risk Management Centre suggests that, apart from safety improvement through the identification and resolution of isolated near misses, there are additional safety and management benefits of a near-miss program. They say in their Phase 1 report of December 2000 that these include:

1. **Delegation of Safety Responsibility:** An effective near-miss program shifts the task of identifying unsafe operations from Environmental, Health and Safety (EHS) management, to a much larger workforce that has intimate contact with process operations / equipment. By harnessing this larger workforce a greater number of safety related issues can be identified and addressed.
2. **Increased Safety Awareness:** By making individuals more safety conscious and by shifting the responsibility of identification of near-misses, unsafe conditions and behaviour to each individual in the work force, both on and off the job – safety of employees can be improved significantly.
3. **Creation of an Information Pool:** The collection and analysis of near-miss data can reduce accident frequency through a) identification of similar incident precursors at other facilities, and b) pattern observation and trend analysis over time. Such a knowledge base would reduce risk exposure in ongoing operations as well as future equipment, process and plant design. (Wharton)

A fundamental question arises in this consideration of ‘near-miss’ reporting: ‘Is the identification of a large number of near-misses indicative of a safe or unsafe on board operation?’ Could it be validly claimed that the identification of a large number of near-misses suggests that there are serious problems and the whole system is unsafe? Alternatively, could it be argued that because there have been many near-misses identified that the seafarers have become more safety conscious. The point being that good safety management actively looks for near-misses, and accidents are resolved proactively before they occur.

If there is doubt about what the correct answer might be, consider the following three hypothetical scenarios and suggest which ship is most probably operating an efficient, functioning SMS:

1. Ship A appears to be operating close to perfection. It has submitted no reports of any accidents, hazardous occurrences, near-misses or other non-conformities for the whole year.
2. Ship B has submitted two separate accident reports – one in respect of an injury to a seaman who slipped on some spilt oil, broke his leg and was sent ashore to hospital, the second report related to a pilot who fell off the pilot ladder – seriously injuring his back. There were no other reports of any other accidents, hazardous occurrences, near-misses or other non-conformities.
3. Ship C has submitted reports in respect of one major incident, five quite serious incidents, 21 minor incidents and 53 hazardous occurrences and near-misses.

It is certainly possible for a ship to operate without experiencing major, serious incidents and possibly to reduce minor accidents to small numbers but it is very unlikely indeed, so long as human beings are involved in the operation of ships, that there would be no hazardous occurrences or near-misses of one description or other during the year. The results from Ship A therefore should probably be viewed with considerable suspicion – probably suggesting that there is no effective reporting procedure on board that ship at all and thus a malfunctioning or non-existent SMS.

It would be very difficult for a ship not to report such serious accidents which resulted in a seaman being hospitalised and a pilot falling off a ladder. In addition to any mandatory requirement to report such incidents they are also very likely to result in claims against the Shipowner who in turn would look to his P&I Club for the appropriate insurance coverage. However, it is very difficult to imagine that if a ship had experienced two serious accidents, as in the case of Ship B, that these would have occurred in total isolation. It is much more likely that such incidents were indicative of inadequate considerations of safety issues and, consequently, one would expect to find many smaller incidents, hazardous occurrences and near-misses. Since none were reported one would be led towards a conclusion that reporting is limited to an absolute minimum and that there is probably little or no effective safety management on board. Is Ship C a floating disaster area? All those incidents and near-misses surely there is a serious problem on board this ship with regard to managing safety? Not so – Ship C is demonstrating a typical pattern of a vessel where the Safety Management System is starting to work. Provided all the incidents are the subject of proper corrective actions, the SMS is then fine tuned to prevent future recurrence then it can be expected that the numbers of accidents, hazardous occurrences and near-misses will reduce over time.

It became apparent from a number of responses that reports are being sent in from vessels of accidents, hazardous situations and non-conformities but with no feedback from the office. Clearly nothing could be more demotivating and demoralising. A British Master described the way things work in his company:

As far as the ISM Code affects my operation the whole thing is a complete 'paper chase' and is seen as such by most of us.

We send in non-conformities and hazardous reports and invariably they are not answered, its all a question of cost. The audits are regularly done but most of the time its only going through the motions.”

The audit system should of course be working both ways and in such a case there should be serious non-conformities raised against the office ashore and the DP.

A similar alarming situation was reported by a Chief Engineer:

We work for ‘An Oil Major’ (the name was supplied) and our working period is 90 days on 45 off – I feel that more safety aspects should be looked at as to who the person is who gives some of these lead audit people their certificates and try and make them into gods – which they think they are. At present time I should say 985 of our company employees are sick of having ISM Code rammed down our throats and nothing is done when we make reports. All our safety audit people do is cover their own backsides when it suits them.

Clearly if that Chief Engineer was typical of the other 984 employees referred to then it is highly unlikely that there could be any semblance of a working SMS in place and it may well be in order to raise non-conformities against the auditors, the Company and the DP.

For others there is clearly an understanding of what the ISM Code is trying to achieve but they are having difficulties balancing all the different pressures upon them. A typical example is the following Chief Officer:

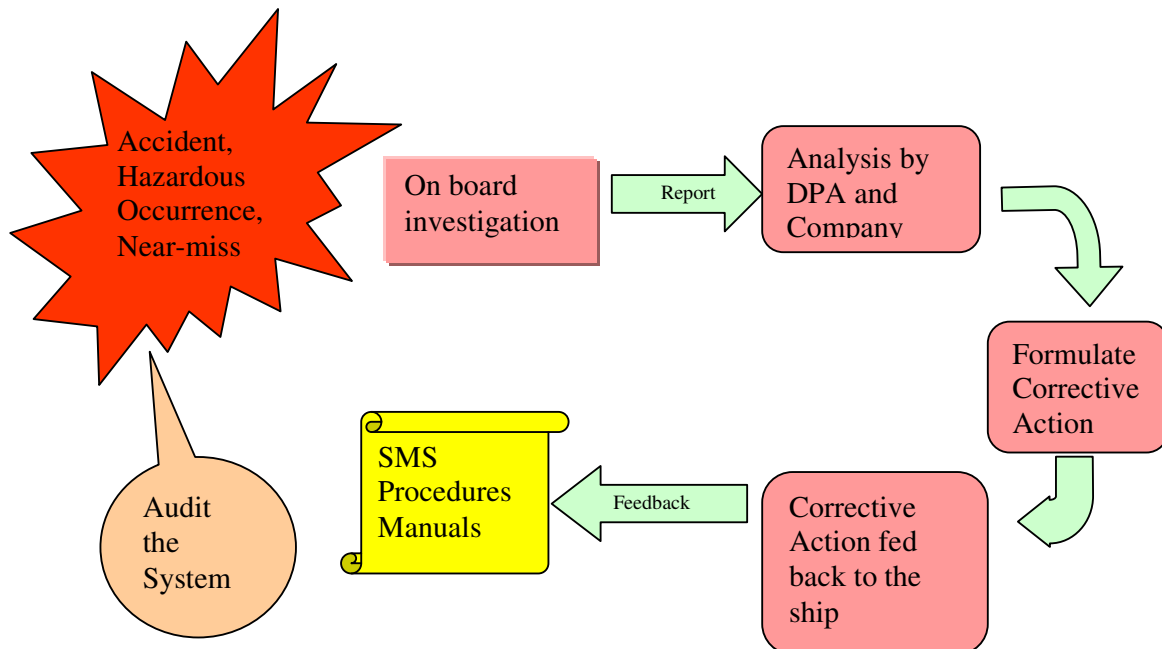
“There are a number of minor accidents and some near misses that go unreported. Many of these occur during the busiest times on a vessel and often the paperwork involved will take a very low priority over the pile of paperwork for operational and other requirements. In my opinion, although ISM is a good thing and has been embraced practically by my company it will always suffer from a ‘extra paperwork’ stigma being attached to it.”

Clearly the dilemma is one of managing time and priorities. If the incident was not too serious and the drafting of the report can wait until the ship is at sea then that is clearly a reasonable thing to do. However, if the incident was serious, or potentially serious, then commercial pressures may have to come second place. It is going to take some time before the shipping industry will accept that approach. Many readers may well have found themselves sat in an airplane on the runway ready to take off only to be advised that a problem has been identified and the plane is going no-where until the problem is solved or the potential problem removed. Whilst it may be felt to be something of an inconvenience - few passengers on that plane would seriously suggest that the pilot should ignore the warning light, or whatever the problem might be, take a risk and fly the plane regardless! The question which arises is why, in the shipping industry are we prepared to tolerate taking a ship to sea when there is a known or perceived problem? Can commercial pressure ever be such that we are prepared to take those risks? No doubt many would say we have always taken those risks in the shipping industry – and that is part of our culture. Perhaps those same people should reflect a little though and consider to what extent those attitudes

actually led to the need for the ISM Code being developed in the first place. Perhaps some of the readers will recall the facts surrounding the *Herald of Free Enterprise* disaster in 1987?

5.6 A cycle of continual improvement

Within Section 9 of the ISM Code is a concept of continually improving the SMS and the management of safety generally on board by learning lessons from accidents or events which nearly became accidents. Of course all would agree that it would be infinitely preferable to prevent accidents happening in the first place – but if they do occur – or something serious nearly happens – then these events should be recognised as learning opportunities – opportunities to ‘fine tune’ the SMS such that corrective actions can be implemented to reduce to a minimum the possibility of such an event arising again. By this process of fine-tuning, and checking that the corrective action has worked, the SMS will lead progressively to a safer and safer ship operation. This concept can be illustrated in a simple flow diagram;



The ISM Code does allow each individual Company and ship to develop systems which best suits their own requirements and the way they do things – therefore it is not possible to lay down one reporting system that would apply to every single Company and ship in the world. However, the above, rather simple flow diagram, illustrates the basic processes which should be followed.

If an incident occurs on board – it doesn’t need to be an actual accident – it could be a hazardous occurrence or near miss or some other warning bell ringing or a non-conformity that has been identified – then it should be noted and reported on board. Clearly the way in which things develop from there will depend upon the actual nature and circumstances of the particular incident. If it is a major incident then professional lawyers and investigators will probably arrive on board very quickly and will assist the Master with the investigation and collection of evidence. However, if we assume, for the purpose of this explanation, that the incident was relatively minor

– we can follow the various steps of the process around the cycle of continual improvement.

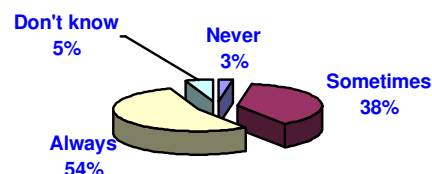
1. The incident occurs – the most appropriate steps are taken to deal with the incident
2. The incident is reported / noted
3. An onboard investigation is undertaken to establish the causal factors
4. The causal factors which led to the incident are analysed
5. An immediate, temporary, corrective action plan is instigated
6. A report of the incident is submitted to the Company – probably the DP
7. The report is analysed by the Company
8. Feedback to the ship is provided by way of a corrective action report (CAR) – this may confirm or amend the suggested corrective action – this may involve amending the formal procedures
9. If appropriate, advice is circulated to the rest of the fleet in order that as many as possible can take advantage of the learning opportunity and ensure that there is not a recurrence
10. The new procedure is formally implemented and communicated to all concerned
11. After an agreed period of time, the relevant part of the system is audited to ensure that the corrective action has had the desired effect.

The questionnaire went on to establish to what extent the cycle was being completed i.e. that, following reports being submitted to the Company, corrective action reports were being sent back to the ships and an audit process was in place to check that the corrective actions were having the desired effect.

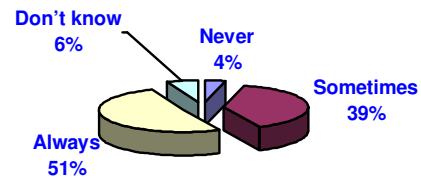
5.6.1 Corrective action reports

From the responses received from both the Seafarers and even more so from the Ship Operators the majority of reports submitted in respect of accidents, hazardous occurrences and non-conformities do appear to generate corrective action reports – i.e. feedback from the office to the ship. An analysis of the Seafarers responses is shown in the following three graphs:

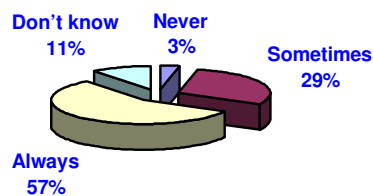
Are Corrective Action Reports returned? - Accidents - Seafarers



Are corrective action reports given? Hazardous occurrences

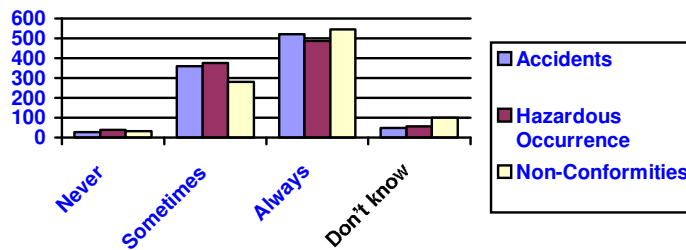


Are corrective action reports given? Non-conformities

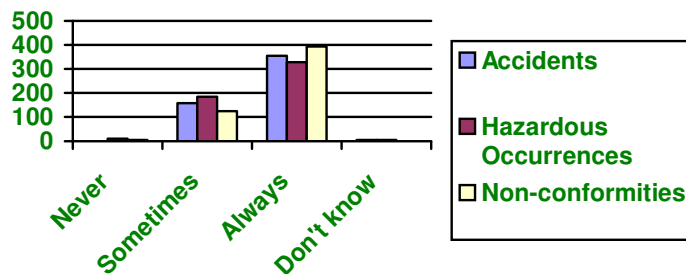


Both the Seafarers and the Ship Operator groups reported unequivocally that corrective action reports are always returned although approximately one third suggested the softer 'sometimes'. The positive significance of this can perhaps be seen more clearly when we group the three types of incidents together – as in the following two graphs:

Are corrective action reports given? Seafarers

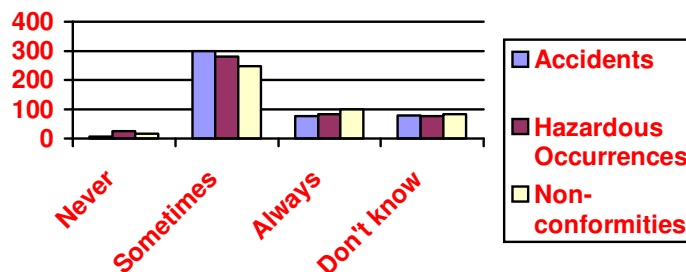


Are corrective action reports given? Ship Operators



However, the 'Other Stake Holder' group was again in serious disagreement with the other two groups of respondents. The perception of the other stakeholder group seemed to be that only a quarter believed that corrective action reports were always returned. They were prepared to give some benefit of the doubt though and allow for the possibility that corrective action reports might be returned sometimes.

Are corrective action reports given? Other Stake Holders



If the Seafarers and Ship Operators are being accurate in their recording that most reported incidents are the subject of a corrective action report then the ISM implementation process would appear to be at a much more advanced stage than had first appeared to be the case.

An important aspect of 'corrective actions' is that they can be considered as the lessons to be learnt from a particular incident. Certainly feedback must be provided to the ship where the incident actually occurred but the lesson to be learnt should be shared around the fleet and even further if possible. This will then allow maximum advantage to be taken from an unfortunate incident. However, some caution does need to be taken as was pointed out by a Ghanaian Chief Officer:

The ISM Code is being implemented by crews / officers from varied backgrounds:- hence internal auditors should not expect same occurrences on sister ships. A corrective action on one ship should only serve as a guideline when attempting to bring it to the notice of personnel on a sister ship.

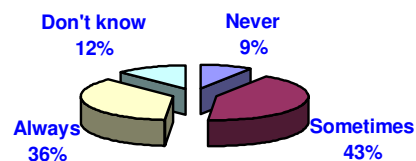
As with everything else related to ISM – common sense must always prevail. Everyone must keep their brains in gear – ISM does not expect people to stop thinking and become some type of robot. One of the aims is to introduce consistency

but if something is clearly not applicable or relevant to a particular vessel then it is difficult to understand how it could possibly contribute to improving safety. If there is a conflict then the matter should be taken up with the DP.

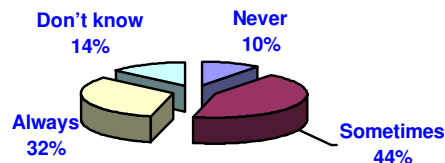
5.6.2 Follow up audits

The survey results with regard to the follow up audits were quite similar to the corrective action reports – except that there was a slightly less positive response with less respondents saying always, more saying sometimes and more saying never.

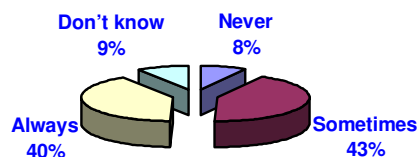
Follow up Audits - Accidents - Seafarers



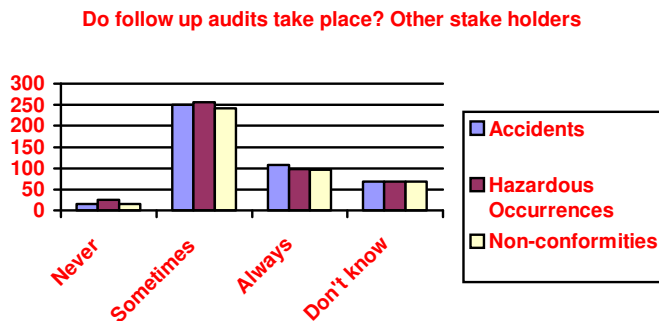
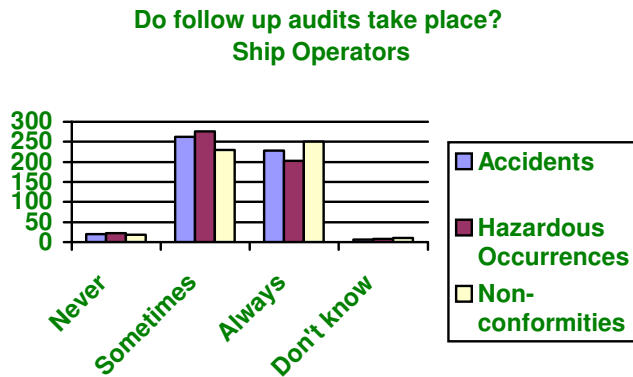
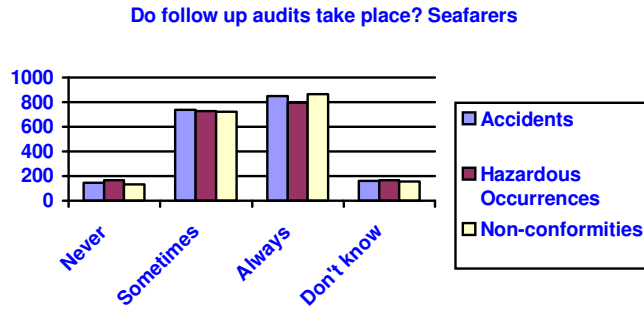
Follow up Audits - Hazardous Occurrences



Follow up Audit - Non-conformity



When the comparative pictures are looked at we still see a very similar pattern with general confirmation from the Seafarers and Ship Operators that about a third are conducting follow up audits on all corrective actions and another half on some of them. The other stakeholder group continue to remains sceptical.



It is quite possible that the importance and full significance of conducting follow up audits, within the context of the cycle of continual improvement, is not fully appreciated by some. An Australian ISM Consultant explained the importance very well:

Since the focus of the questionnaire appears to be NCs, accidents and incidents, I can honestly say that this is one area that few companies manage very well, and thus fail to reap the full benefits of the reporting system. Most have good reporting systems, but fail to follow up effectively. Firstly, there is a lack of timely corrective action and, secondly, there is usually no follow-up to see that the proposed corrective action was effective. Near miss reporting and follow-up is almost non-existent, even in the best of companies, usually due to lack of understanding and training.

On the basis of the answers given in the survey, at least as far as the Master and Seafarer and Ship Operator groups are concerned, everything would appear to be proceeding very well indeed towards compliance with Section 9. Consequently, if the author is correct in his assessment of the significance of Section 9 as an indicator of general compliance, then the majority of the respondents are well on their way to full compliance with the ISM Code including the implementation of no-blame safety cultures.

Perhaps it would be helpful to recap where we have got to so far, as far as Master and Seafarers and Ship Operators are concerned:

- The majority believe that the company they work for promotes a 'no-blame' culture
- the majority believe that they work within a 'safety culture'
- the majority believe that they have 'ownership' of their SMS
- almost all accidents, hazardous occurrences and non-conformities are being reported
- corrective action reports are being returned for almost all of the reported incidents
- most of the corrective actions are being implemented

Many of these results / conclusions would appear to be contradicted by the answers given to the next series of questions in the questionnaire. They also appear to be contradicted by the narrative comments included at the end of the questionnaire.

5.7 Reluctance to report

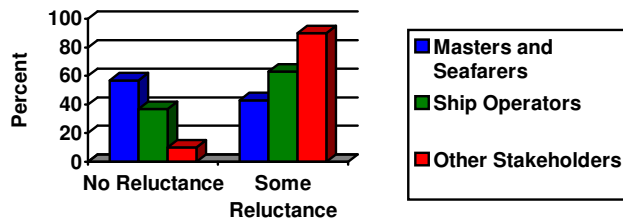
It is certainly possible that objections and criticisms could be raised against the series of questions in the questionnaire asking whether there was any reluctance to report incidents. In one sense they were perhaps 'leading' questions but on the other they provided an opportunity for the respondent to 'open up' a little in his / her responses to the questionnaire. The responses provided to this series are extremely interesting and enlightening and perhaps start to provide a clearer insight into the current status of peoples real attitudes towards ISM and the implementation of the SMS as well as such things as the so-called 'no-blame' and 'safety' cultures.

The questions were almost rhetorical in nature suggesting that if there was any reluctance to report incidents then why should that be. The questions provided ten possible reasons, plus an open box in which the respondent could insert a different reason. The respondents were invited to identify up to three factors, giving order of priority, of reasons why they were reluctant to report. The respondents were given the option to state that there was no reluctance to report. That option would clearly render the question academic as far as that respondent was concerned. However, what actually happened was that most of the respondents who had previously indicated that they were reporting everything and doing all that they were supposed to be doing actually identified a whole range of reasons why they were reluctant to report.

Recalling the answers provided to the earlier questions about 'no blame' and 'safety' cultures, one could reasonably have expected that there would be no reluctance at all to reporting accidents at least and probably little reluctance to reporting hazardous occurrences and non-conformities. That did not turn out to be the case though. Rather surprisingly nearly 50% of the Seafarer respondents said that they were reluctant to report even accidents.

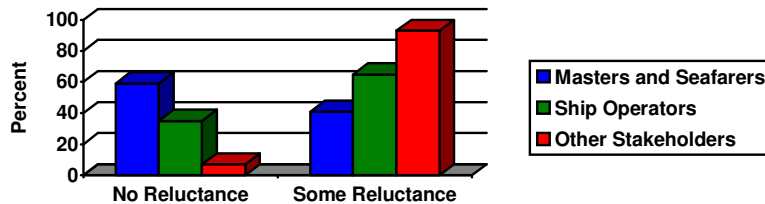
The way the Ship Operator's version of the questionnaire was phrased meant that they were giving their view as to whether or not they thought there might be any reluctance on the part of the Seafarers to report. It was even more surprising therefore to find that almost two thirds believed that the Seafarers would be reluctant to report accidents. When it came to analysing how the Other Stakeholder category responded it was really quite staggering that only 10% believed that Seafarers would not be reluctant to report accidents.

Reluctance to Report Accidents - Comparison of Perceptions

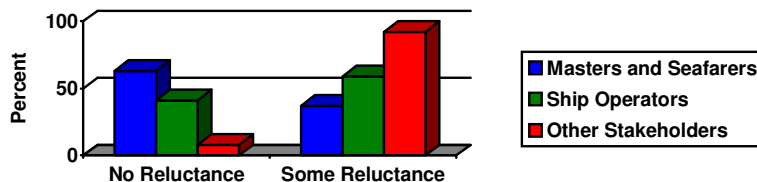


Almost identical results were received with regard to reluctance to report hazardous occurrences and non-conformities.

Reluctance to Report Hazardous Occurrences - Comparison of Perceptions



Reluctance to Report Non-Conformities - Comparison of Perceptions



The way the questionnaire had been structured was intended to give the respondent a choice – either they ticked the box to say there was no reluctance to report or to tick up to three boxes to indicate why there might be a reluctance to report. What happened though was that many respondents ticked the box indicating that there was no reluctance to report but then went on to tick further boxes indicating why there was a reluctance to report! Clearly this was contradictory in itself but it also seemed to contradict the earlier answers in which the majority of respondents seemed quite clear

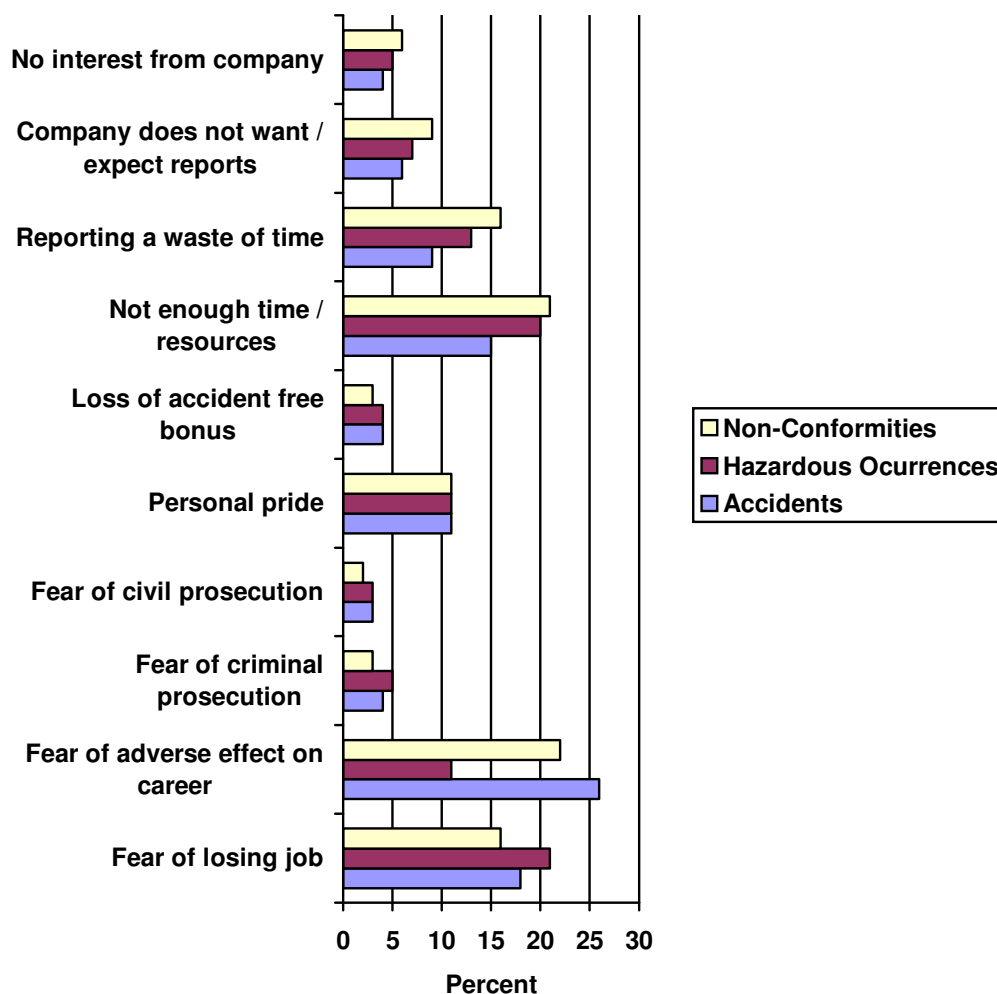
that they believed their companies operated a ‘no-blame’ culture and they were working within a safety culture.

It is important that we keep these apparent contradictions in mind as we now explore some of the reasons why the Seafarers are reluctant to report accidents as well as hazardous occurrences and non-conformities and why the Ship Operators and Other Stakeholders believe the Seafarers have reluctance.

5.7.1 Reluctance to report – Views of Masters and Seafarers

In answer to the earlier question almost all Seafarers said that they reported most if not every accident. It really is of considerable concern therefore that the same Seafarer respondents should now declare that they are reluctant to report accidents. An analysis of the reasons given, and the scale of the concern, is shown in the graph below which also includes a comparison with the reasons why there might be reluctance to report hazardous occurrences and non-conformities:

Reluctance to Report - Seafarers



In the questionnaire the respondents who were to state that they were reluctant to report were asked to list up to three reasons and to rank them in order of priority. When constructing the graph the method used for determining a figure to use was to consider a first priority choice as 3 units, a second priority choice as 2 units and a third priority choice as 1 unit. In this way a total number of units were allocated to each option and the graphs drawn to show those units as a percentage of the whole.

It becomes clear from the analysis of the results that Seafarers fear the repercussions that reporting might bring to their employment and career prospects. This could perhaps have been expected as far as reporting hazardous occurrences are concerned i.e. where one might be admitting a mistake which otherwise no-one else would have known about but being frightened of reporting actual accidents is worrying. Of course if there really was a 'no-blame' culture in existence then reporting all incidents would be seen as a rewarding experience, a learning opportunity, and any fears should have been dispelled long ago. It is important however to analyse the figures as they are and try and make sense of them.

Certainly the fear of losing one's job or seeing career prospects damaged did show up to be a significant factor. An ISM Consultant who did have first hand experience identified a particular incident of which he was aware:

*...Look at for instance chemical tankers in main ports such as Rotterdam. The officers and crew are working around the clock. This is well known to the Company, but if the crew complain they get no answer or '...if they don't like the Company they could find other work...'
It will take many, many years yet before we will get a good safety system implemented in full."*

A Filipino Master set out the problem and the solution very clearly:

In my opinion, to maximise reporting of hazardous occurrences / near misses and to eliminate reluctance to report same, there must be some ways or provisions in the code that will guarantee the person who report that he / she will have no fear of adverse effect on career prospects, losing job and any prosecution.

Another report from a Chief Mate proposed a similar need – this time based upon thoroughly disgraceful behaviour by his employers. He shared the following experience:

*There needs to be a guarantee of protection for the mariner who is reporting or is part of a situation being reported.
I received a Letter of Warning from the USCG for not following SMS procedures over a Near Miss incident where it was discussed in a safety meeting and then a crewmember anonymously passed the information to the USCG. A piece of atmospheric test equipment failed, and personnel entered 10 feet into a cargo tank not fit for entry. These experienced people didn't like the "smell" of the tank and immediately exited with no harm. I got no support or backup from the company when I was approached by the USCG and the only way the details of this incident would have been available to anyone other than those involved was directly through the "near*

miss" discussion. I was demoted to 2nd Mate and never promoted back up to my C/M position of 10 years. I am now sailing C/M with another company with another horrible SMS."

Hopefully the Chief Mate will eventually find an employer who is equally enlightened and will reward that type of reporting which would very likely help to save lives.

The author had anticipated, when he first constructed the questionnaire, that if there was any reluctance to report then it would probably be because people were afraid of either civil or criminal prosecutions being commenced and the reports being used as evidence against the originators. That proved not to be the case at all – the survey results indicate that, amongst the Seafarers, there is little worry about such prosecutions and certainly that was not a concern that would make them reluctant to report the incidents.

The extent to which Masters in particular, but also other Seafarers, are exposed to criminal sanctions – fines and even lengthy jail sentences for a wide variety of ‘offences’ including non-compliance with the ISM Code is really quite staggering.

A Chinese Master felt that the Master needed reassurance that he could rely upon the provisions of IMO Resolution A.433(XI) – Decisions of the shipmaster with regard to maritime safety and marine environmental protection – which was intended to give the master legal protection if he did carry out his job as he was supposed to do. He also felt that the ship operators should be exposed to criminal sanctions. His conclusion, and solution are set out below:

After 3 years, my conclusion is ISM has not improved our marine safety and environment protection but makes worst.

My suggestions:

- (1) national legislation should reinforce the spirit of IMO Resolution A.443(XI) which protects the masters from unjustifiable dismissal;*
- (2) the shipowners, operators and DPs should be criminally liable for their wilful default or gross negligence, and the penalty should include imprisonment;*
- (3) DP shall not be the same person as operation manager or anyone involve in the daily operating activities."*

Under UK legislation the Ship Operator, DP as well as the Master and anyone else involved in the operation of the SMS may be exposed to a wide range of criminal sanctions for various offences relating to the implementation of the ISM Code.

Personal pride was recorded as a factor that made some Seafarers reluctant to report incidents. This is a very human response – no one likes to admit that they fouled up, or nearly fouled up. However, it is this factor which needs to be overcome in the ‘no-blame’ culture such that these incidents are examined as learning opportunities. The most important issue is not to find someone to blame but rather to find out what went wrong and establish what needs to be done to prevent a recurrence.

In some companies, in an attempt to encourage the development of a ‘safety culture’ they offer their staff various bonuses or other incentives by way of a reward if they reduce the number of accidents on board. This is a good idea in principle but could, in some cases, encourage the Seafarers to stop reporting incidents for fear that they would lose their bonuses. The accidents had not stopped – they had just been brushed under the carpet, so to speak. The fear of losing the accident free bonus was therefore

included as a possible option that the seafarers could choose. In fact it turned out to be not an issue at all. Very few respondents indicated any concern with accident free bonuses.

Similar schemes involve actually rewarding seafarers if they do send in reports. Such a scheme was described by the safety manager in a Greek shipping company:

I believe that one useful 'tool' in fighting the fear of reporting should be the adoption of an ethical reward scheme to ships that come forward with their non-conforming conditions and we should then focus on how to rectify this (possible) unsafe condition instead of focussing solely on the correctness and exactness that the reporting form has been completed.

This is possibly an excellent scheme which could work very well and achieve the desired results if managed properly. However, again it could be open to abuse in that spurious or irrelevant reports were being submitted – purely to obtain the reward.

One of the most significant issues was the feeling that there just was not enough time to report. This was repeatedly the subject of detailed narrative comments received from a wide range of respondents. The inference being that if there was more time, and perhaps other resources, then reporting would be undertaken without reluctance. There seems to be an understanding amongst many in the industry that the SMS has to be paper-based. The author has had difficulty understanding this perception since there is no reason in his mind why the SMS should not be run on an electronic system – provided it was adequately backed up and the people who needed to access the system could actually do so. Indeed there are some very good software programs available on the market that would allow a ship operator to construct their own electronic SMS. Such an electronic system could help reduce the labour intensive paper based reporting considerably. A marine surveyor raised this very issue :

The ISM code has made management ashore more aware of the operational difficulties encountered on board their vessel(s), however, many masters complain about the volume of reading material and paperwork. Many ship's officers allege the company they work for operates no differently from before ISM was implemented. This Surveyor believes the ISM code has had a beneficial effect, but the expectations may have been greater than the actual result. What may be more useful, than the volumes of ISM code books found in the shipboard offices, would be a software package, employing computers now found on board, which would simplify the mandated reporting procedures, supplemented by an Email protocol. Most ocean-going vessels now employ this technology and it should be used more effectively in a real time reporting environment.

On a related matter, the author is aware of a very exciting project which is at an advanced stage of development which allows the use of portable and fixed electronic recording devices to be used to directly enter data into a PC and thus creates records and reports almost automatically. The officer must still physically undertake the checks but uses the electronic device as a labour saving tool. As of September 2002 the system is undergoing trials onboard a number of different types of ships.

Of considerable concern was a relatively significant number of Masters and Seafarers who stated that they were reluctant to report because, basically, they considered

reporting to be a waste of time. There were two other groups, although smaller, who seemed to believe that the company did not want or expect reports and that there was no interest from the company.

There are probably a number of very different reasons why certain seafarers felt so negative – maybe it was a reflection of their own attitudes towards ISM – maybe it was a true reflection of a company who really didn't care. Clearly these groups are probably going to be the most difficult to persuade that reporting is a very important factor in the successful management of safety.

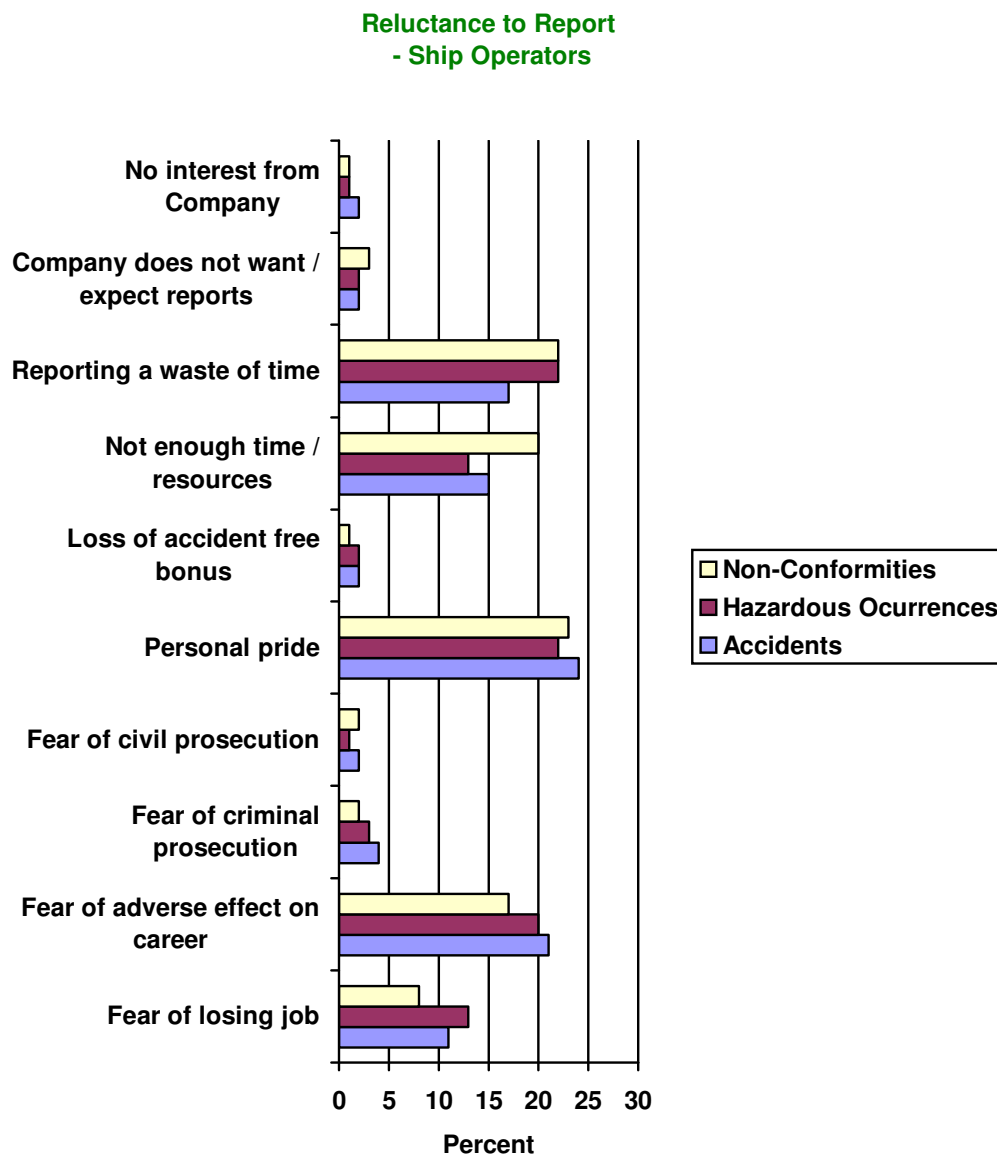
A reason for reluctance to report incidents which had not occurred to the author at the time of constructing the questionnaires was racial intimidation. It is not known how extensive this problem might be but the following was received from a Filipino rating working on board a Norwegian Flagged vessel:

There is a reluctance report anything because of racial discrimination – there is no democracy.

Certainly there were many comments received from 'OECD' Masters and Officers which could be easily interpreted as having racist undertones. Reports from the Seafarers International Research Centre based at Cardiff University try to suggest that racism is not an issue at sea since the industry has achieved a relatively high level of 'globalisation' – from reading some of the reports submitted the author very much doubts that that reflects the actual situation (SIRC).

5.7.2 Reluctance to report – Perceptions of Ship Operators

Let us now consider how the Ship Operators responded to these issues. Remember that the Ship Operators are not expressing their own views about any reluctance they may have about reporting – rather they are giving their views on why they think the Masters and Seafarers might be reluctant to report. In some respects they were quite accurate and mirrored the Seafarers responses quite closely – in other respects they differed quite significantly:



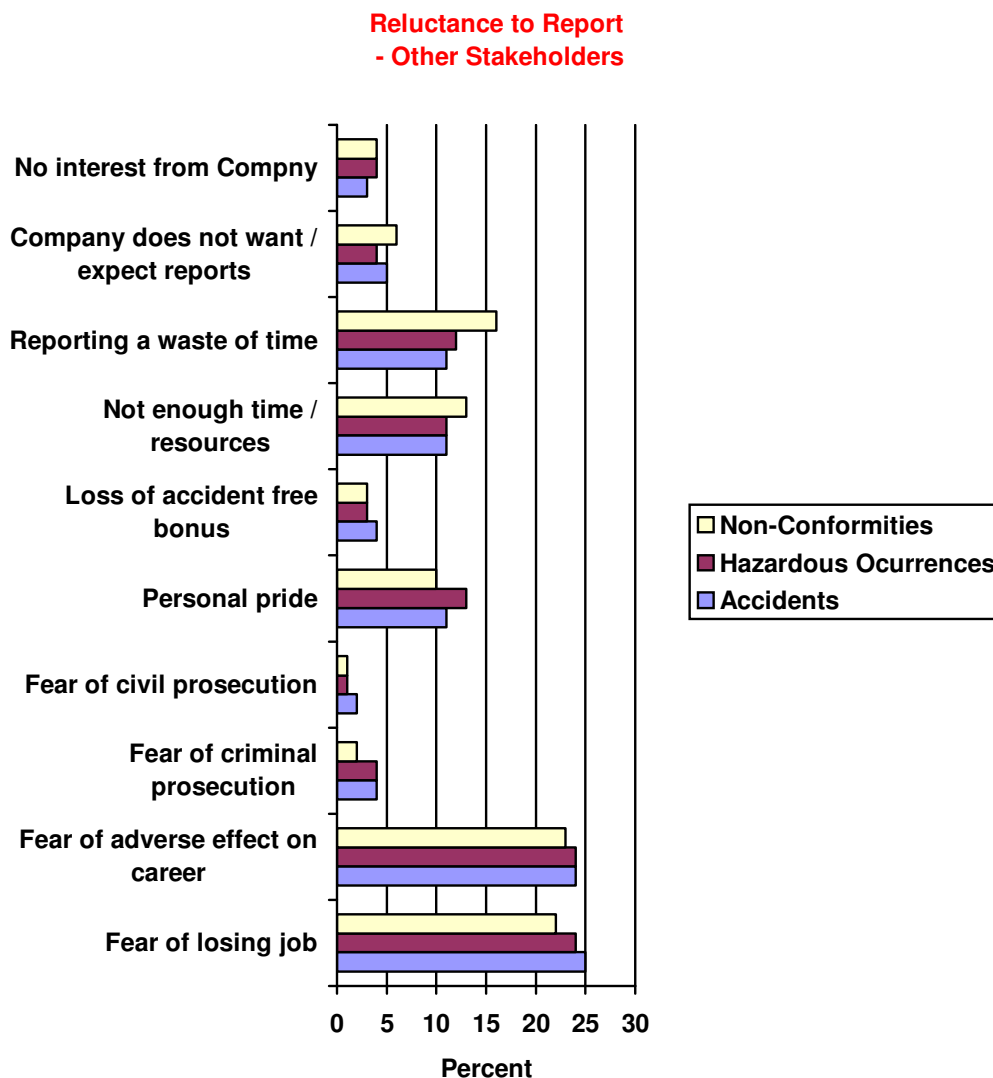
Certainly they recognised that the seafarers did have concerns about possible repercussions with regard to their employment and career prospects. Somewhat surprisingly the Ship Operators agreed that the Masters and Seafarers would not be unduly concerned about possible civil or criminal prosecutions.

One of the big differences came with ‘personal pride’ – the Ship Operators perceived this to be a major factor that might inhibit reporting. The perception of inadequate time and other resources was also identified by the operators. The other major factor where the Ship Operators seemed to be even more pessimistic than the seafarers themselves was the idea that reporting was just a waste of time.

Interestingly, the Ship Operator respondents appear to have considered it almost inconceivable that the seafarer could think that the company did not want or expect reports and certainly not entertain the idea that the company might not be at all interested in any reporting procedure.

5.7.3 Reluctance to report – Perceptions of Other Stakeholders

Finally, let us consider the perceptions of the Other Stakeholder group – what reluctance did they think might inhibit the Master and seafarers from reporting? Interestingly many of their perceptions coincided quite closely with the Masters and Seafarers own reservations. Perhaps the biggest difference was that the other stakeholder group put a much greater significance on the potential effect on employment and career prospects:



Generally the responses received from the Masters and Seafarers in this section seemed to be much more in line with many of the narrative comments that were received compared with the answers which had been provided earlier about the levels of reporting and ideas of no-blame and safety cultures.

In an attempt to encourage seafarers to report incidents the Port State Control Officers are actively discouraged from close examination of the actual contents of reports according to Captain Olle Wadmark of the Swedish Maritime Administration who said:

‘...the PSCO may ask for records of the most recent internal audits ... (but) should not normally scrutinise the content of any non-conformity notes...’
(Wadmark)

The situation does appear to be that there is reluctance to report – to a large extent this reluctance is understandable but if ISM is to work then we need to find ways of overcoming that reluctance. The issue was stated very well by a superintendent from a shipping company who said:

...The old concept of keeping everything wrapped up onboard and hidden from eyes outside needs to disappear and a system of transparency needs to be developed where crew are in a position where they can, with confidence and pride, report anything on board that is not right and needs to be rectified...

A related observation was submitted by an ISM Consultant:

Seafarers will only enter fully into the reporting process if they are confident of having the backing of Management, including timely replies and evidence of action taken. While many feel insecure in their jobs and are faced with either apathy or sometimes antagonism from Management, one can understand their reluctance.

Without a doubt this whole issue of transparency within a no-blame / safety culture is likely to be difficult for some companies and individuals but, eventually, it will become ‘...the way we do things round here...’

6 Is ISM Working?

At the very end of the questionnaire for Masters and Seafarers and Ship Operators, and near the beginning of the version of the questionnaire for Other Stakeholders – two big questions were posed:

“In your view have the number of accidents, hazardous occurrences and non-conformities reduced since implementation of the ISM Code?”

“In your view has the ISM Code achieved its objectives?”

The way these questions were phrased was in anticipation of a somewhat subjective answer reflecting more a general perception by the individual respondent rather than any objective / factual statement. In hindsight the questions may, in certain circumstances, be flawed. This applies to the first question in particular.

The question possibly includes a presupposition that there were occurrences of accidents, hazardous occurrences and non-conformities prior to ISM implementation that could be reduced. The second question may make an assumption that it was possible to make ships safer. A number of respondents seemed to hold the view that they were already operating close to perfection as far as safety was concerned and therefore the ISM Code had nothing to offer. The author can only apologise to those who were at that extreme end of perfection but, working on an assumption that there were probably not too many companies or ships operating without any accidents, not having a single hazardous occurrence and with such perfect systems in place that non-conformities just did not happen – then it is possible that the questions are not too seriously flawed.

The questions were really intended to solicit a view from the individual respondents as to whether, in their experience, the ISM Code was starting to work / starting to manifest measurable results.

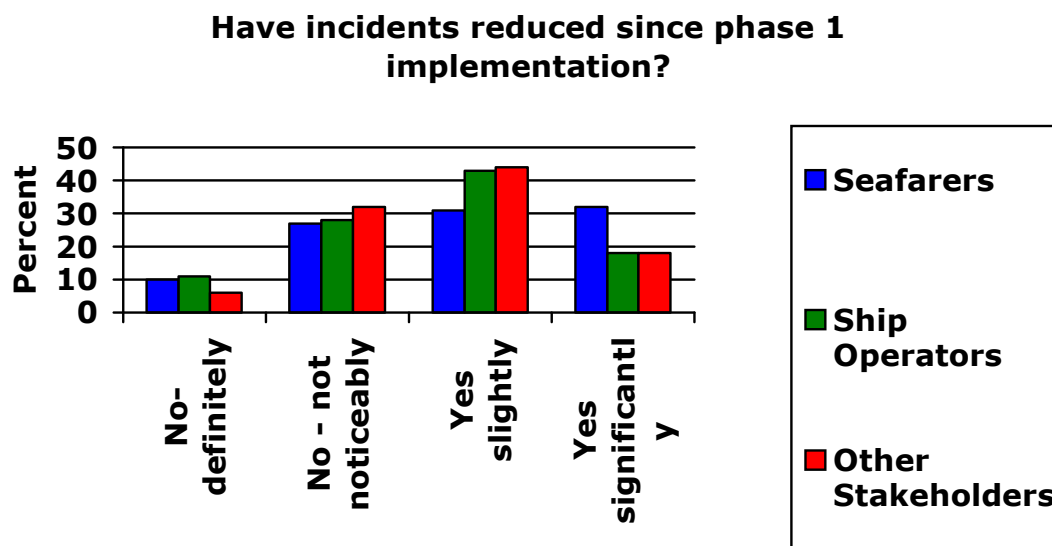
When the first wave of questionnaires started to be returned, mainly the blue ‘Master and Seafarer’ forms, there was an unexpected and worrying surprise. The answers to these two ‘big’ questions and the narrative comments that were included suggested a very negative attitude indeed to the whole concept of ISM. It had certainly been anticipated that there would be some negativity but the apparent condemnation which was coming in was much worse than expected. Initially this took the author by surprise and it took some time before he started to understand what was happening.

As time went on more and more positive and supportive replies were received and fewer and fewer outright negative responses. Still the explanation for this strange phenomenon eluded the author. Before exploring that further though, let us consider the overall results of the survey.

6.1 Have incidents reduced since Phase I implementation?

The respondents were given the opportunity to choose from four specific statements – at one extreme they could say ‘no definitely’ or opt for the much softer, middle of the road ‘no – not noticeably’ and, at the other extreme end to report ‘yes - significantly’ to the weaker ‘Yes – slightly’. They could also declare that the ISM Code did not yet apply to their own situation and therefore they could not offer a point of view. They

were also given the option to state that they did not know the answer. The analysis of the 3000 questionnaires that had been submitted produced results as per the following graphs:

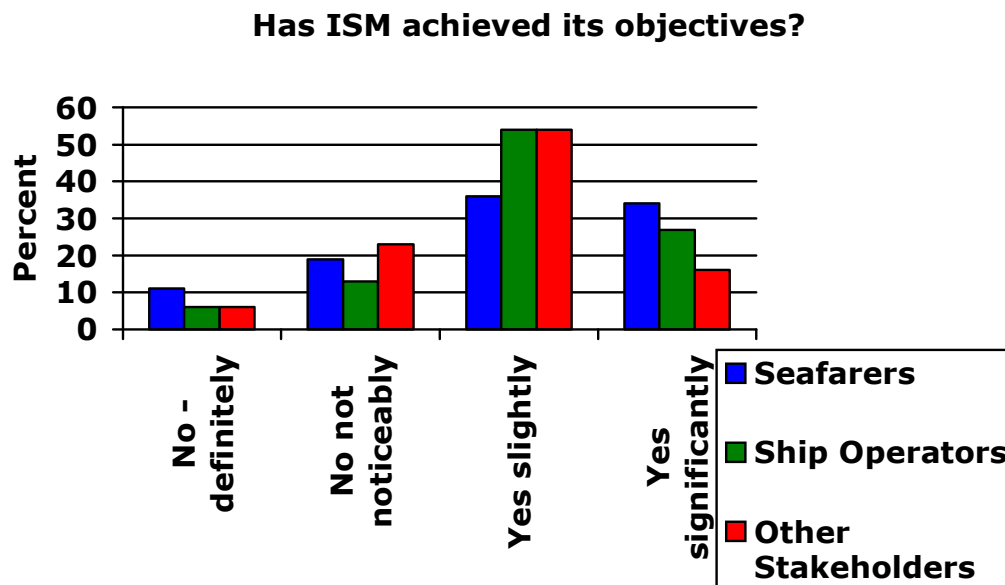


On the whole there was a reasonable level of agreement between the three participating group – although the Masters and Seafarers were a little more biased towards the positive end. The overall result though was a fairly classic distribution curve with the bulk of the respondents somewhere near the middle, without strong views, and a smaller number of strong views at each extreme end. The general view seemed to be that the number of incidents had probably not changed significantly since Phase I implementation – although more than 30% of Masters and Seafarers and a little under 20% of the other two categories considered that there had been significant reductions. In the end only 10% of respondents felt that there had definitely been no reduction of incidents.

Because of the way the database had been set up, it had been possible, without too much difficulty, to watch this curve develop during the period of the research. In the early stages the bias was very much towards the left, negative, side – only in the later stages did the strong shift towards the right start to occur. It was not immediately apparent why this shift was occurring.

6.2 Has ISM achieved its objectives?

The next question, asking whether ISM had achieved its objectives, produced quite a similar result - although with a stronger bias towards the positive end of the scale. In hindsight perhaps the question was too strongly worded – it made an assumption that it was possible for the ISM objectives to be achieved in the time scale since July 1998. The question perhaps should have been phrased in such a way that the respondent was being asked to comment on the trend towards achievement rather than having actually reached the goal. However, it would appear that few people took the question too literally and seem to have had the trend rather than the end result in mind.



Considering the answers to the two questions together it is interesting to see that the respondents seem to be suggesting that a reduction in incidents is not necessarily required in order to make progress towards achieving objectives. This is probably correct, in the early stages, since the setting up of the systems – and even more difficult the setting up of a new way of working i.e. no-blame and safety culture, will not happen overnight. However, having considered results from companies who have started to approach the end of the tunnel – the rewards will start to follow as a natural consequence; accidents and claim will reduce.

Having said that, it is perhaps worth reflecting upon the views of some external observers. It is certainly possible that their views may be much more objective – since they should be impartial although they may not have the benefit of detailed knowledge of the full workings of the systems. A number of pilots submitted observations and, interestingly, many were quite critical of what they had seen. The following were two quite typical examples:

1. Working as a Pilot (mainly tankers) I am not directly involved in the operation of the ISM Code.

Boarding ships of various owners and nationalities gives a good opportunity to observe standards on board and get the views of masters and officers.

Since the ISM Code was introduced there has been no noticeable improvement in standards. We see the same ships and the same people on them, all that has changed is that ships staff are further burdened by a mass of paper work.

The success of the Code seems to depend on companies operating within the 'spirit' of the Code but the companies which really needed the Code are hardly likely to enter in to this spirit and just see the code as another bureaucratic obstacle to overcome or circumvent.

2. As a marine pilot I see about 400 ships a year. ISM may be working on some ships, but unfortunately from a pilot's perspective it seems many times to be a check off ritual only. Often I see Pilot Cards as photo copies with the bow thruster box ticked as fully operational and the ship does not even have one! Training still seems deficient in many ships - there is a perception that many personnel are just going through the motions. All the mate wants to do is obtain your name, sign the pilot card and whip it away from you, before you can even read it.

One pilot was based in North Western Europe and the other in Australasia – the similarity of their observations and perceptions is therefore of even greater concern. It may be worth further research amongst pilots to establish exactly how widespread the pessimistic perception and poor experiences of ISM might be.

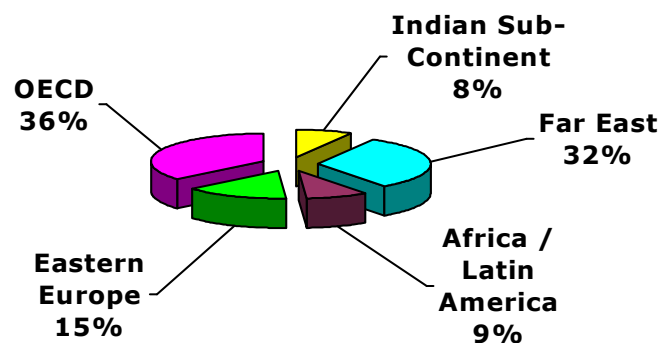
6.3 Cultural / National differences of perceptions

In the middle of 2001 the results of a BIMCO / ISF survey into manning was published (BIMCO / ISF 2000 Manpower update – The worldwide demand for and supply of seafarers – Main Report – IER University of Warwick + abridged report in ISF annual report 2001). The survey looked at the current situation with regard to where the Masters, officers and crew who were manning the world fleet were presently coming from. It looked at the status of recruitment and training and made certain predictions about where the seafarers of the future would be coming from. One of the main purposes of the report though was to establish whether there were going to be an adequate and sufficient labour force in the future and, if not, what the short-fall was likely to be.

The author read the report as a matter of academic interest – not realising initially that it was going to have important relevance to his own research.

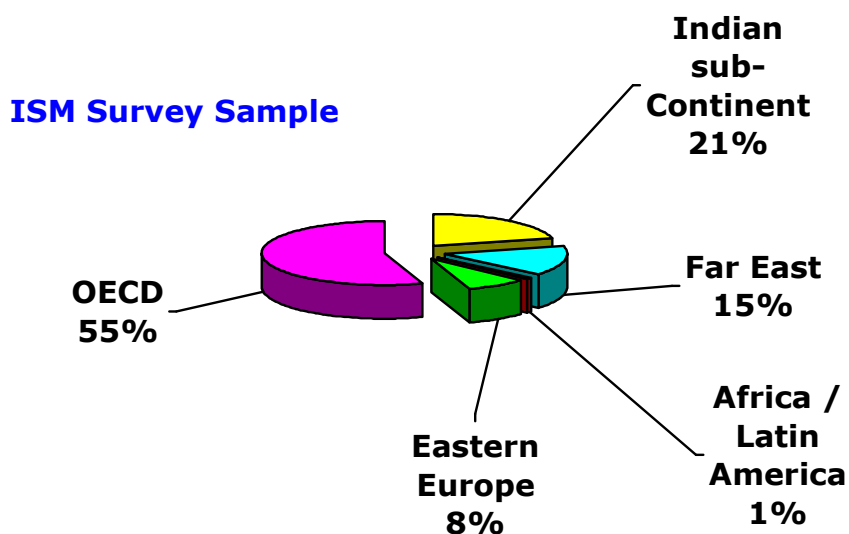
The BIMCO / ISF survey split the World's seafarers into broad national / regional groups. Their findings suggested that the Officers of the world fleet, split according to those groups, was as per the graph below:

BIMCO /ISF Study - Officers



In the questionnaire the respondents had been asked to state their nationality – and it occurred to the author to see if there might be any national / cultural differences to experiences and perception about ISM. It was somewhat labour intensive, slotting each individual into his or her correct group but the end result was well worth the effort.

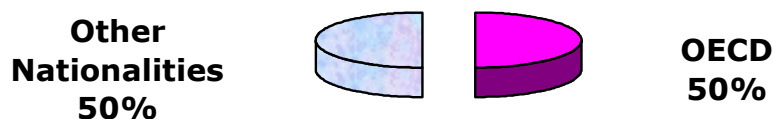
The Masters and Seafarers who had responded to the survey, and who had indicated their nationality, produced the following split:



This result did not map perfectly onto the BIMCO / ISF result – there was a greater number of OECD and Indian respondents and less Far East and Eastern Europeans. However, it was felt to be reasonably close enough to the current world manning situation to be worth proceeding with an analysis.

Before considering the results of that analysis, it is also worth identifying another interesting and relevant factor which came out of the BIMCO / ISF survey. It had established that 50% of the Masters and Chief Engineers, i.e. the command / most senior officer positions on board ships of the world fleet were still from the OECD countries. The other 50% coming from the ‘developing nations’ – particularly India, the Philippines and the former Soviet Union countries.

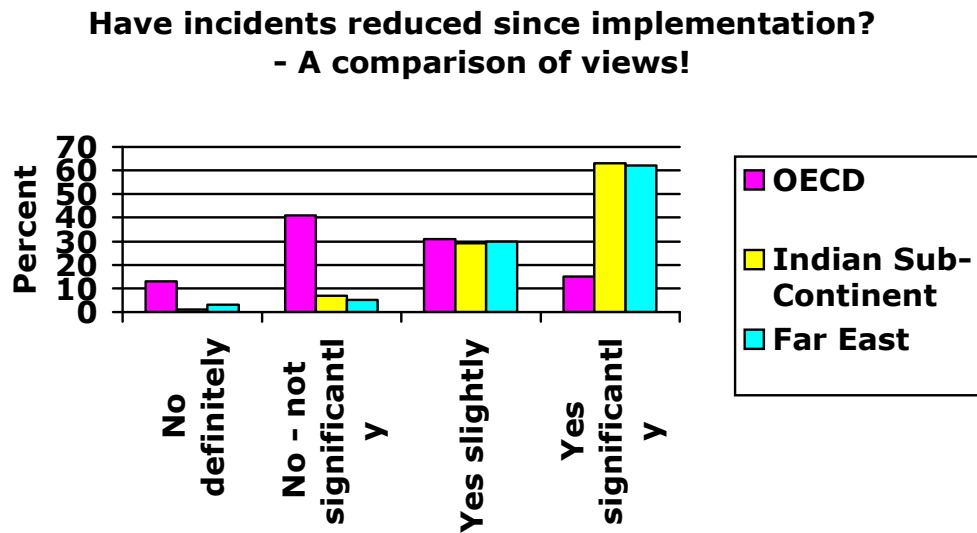
Current Position Re Masters and Chief Engineers



That fact in itself was not so important – what was much more significant was that almost all the OECD Masters and Chief Engineers were over 50 years of age who

would be retiring within the next ten years and there were very few OECD nationals following behind to take their place when they did retire. From the late 1970's until the late 1990's very few potential officers were recruited or trained from OECD countries. The significance is that, within a decade, almost all the ships of the world will be commanded by Indians, Filipinos and individuals from the former Soviet Union. Of course there will also be Masters and Chief Engineers from other developing nations.

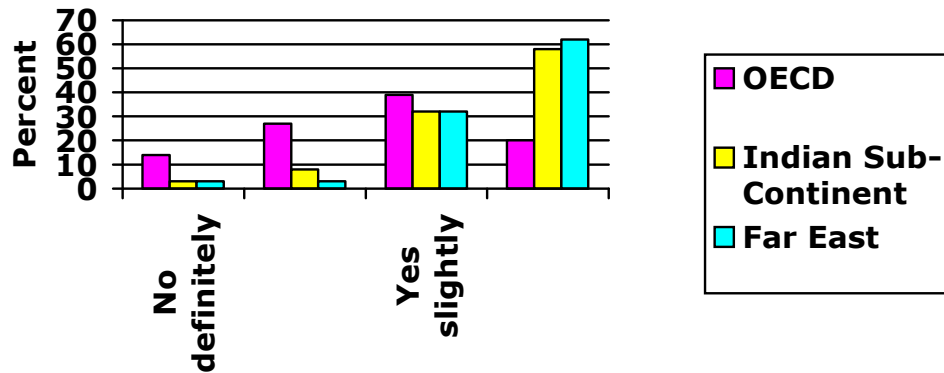
In order to avoid too much clutter in the diagrams and to ensure a reasonable sample size, it was decided to compare the views of the three largest groups of respondents from the Master and Seafarer categories. These were the OECD nationals, the Indian sub-continent (mainly Indians) and those from the Far East – primarily Filipinos. When these groups were separated out – the result was quite amazing:



The responses from the OECD Masters and Seafarers shows a very classic distribution curve with a slight bias towards the negative – approximately 60% saying no - definitely or no – not significantly in answer to the question whether incidents had reduced since Phase I implementation. However, the results from the Indians and the Filipinos, which were almost identical, showed an enormous swing towards the positive side of the scale. They were not just going for the ‘softer option’ of ‘yes – slightly’ but over 60% had gone for the much stronger ‘yes – significantly’. Very few opted for the ‘no-not significantly’ option and there were almost none who went for the very negative ‘no –definitely’ end of the scale.

An almost identical picture emerged when the answers to the other ‘big question’ were split in the same way – although the OECD respondents were shifting a little towards the positive.

Has ISM achieved its objectives? - A comparison of views



The mystery of why the trend had been shifting during the course of the survey was starting to make sense. The initial distribution of the bulk of the questionnaires was with the Nautical Institute journal *Seaways*, the NUMAST Telegraph and the IFSMA bulletin. As such the first recipients would have been the shore-based seafarers in the UK. Whilst some of these may have been seafarers on leave or working on ferries or other short sea vessels – many would be retired seafarers or otherwise people who were working ashore but who felt that they did not fit into the ‘Ship Operator’ or ‘Other Stakeholder’ categories. The next wave of responses were from other OECD nationals, particularly from Australia, Canada, New Zealand and the United States who were perhaps from similar backgrounds. It was difficult to establish, in many cases, what their recent seagoing experience was or whether they had actually sailed with ISM systems. The group did however indicate a strong negative attitude towards the concept of the ISM Code. It was sometime later that much more varied responses started to be returned. Allowing for the time lapse - this was probably the deep-sea seafarers who were actually working on board ships who were starting to get their questionnaires returned. As more time went by the completed questionnaires were increasingly coming in from non-OECD nationals – particularly Indian Masters and officers and, later still, Filipinos.

If these results were accurate i.e. that Indian and Filipino Masters and seafarers were having a much more positive experience of ISM, or otherwise had a much more positive attitude towards it – then this would have, potentially, a very significant impact bearing in mind the conclusions of the BIMCO / ISF survey. If the Indians and Filipinos were going to command, and man, a large section of the world fleet within the next few years, and if they were so positive about ISM, this would surely provide much hope for the future successful development of the Code. The big question was: were the Indians and Filipinos being honest and accurate when they answered the questionnaire. This may sound like an unfair, rather arrogant and perhaps even racist question to raise. However, if the results of this survey were to stand up to the criticisms which were bound to follow – that question had to be asked and the possible answers fully explored.

There would appear to be at least four possible explanations:

1. The respondents were deliberately lying
 2. they had totally misunderstood the questions
 3. they were providing what they believed were the 'correct' answers
 4. they really did believe that the ISM Code was working
-
1. There were so many individuals involved that the idea of all those individuals each deciding to deliberately submit misleading answers has no logical justification at all. There is no evidence what-so-ever that there was some sort of plot or conspiracy on the part of whole national groups to sabotage the survey by deliberately submitting misleading answers. There would be no purpose to be served by lying and any such idea is untenable.
 2. Almost all Indian Masters and officers speak and read excellent English and, invariably, have had the benefit of a good basic education before they embarked upon a seagoing career. Whilst English is much more of a second language for Filipinos – their command of the language, particularly at senior levels, is very good. There is no justification therefore to suggest that the respondents did not understand the questions or the answers they were giving.
 3. Whilst it is perhaps wrong to stereo-type people – particularly by national groups – the author would venture to say that, in his experience, both Indians and Filipinos tend to be courteous and polite people. It does not seem to be within their character to want to deliberately cause offence – they would rather please. There are many Europeans who have perhaps sailed with Indian and Filipino seafarers who would tend to go even further in their psychological profiling of these groups. At its most basic they would say that Indians, and more-so Filipinos, would tend to tell you what they think you want to hear. This is not done to deceive you but rather because the individual wants to please you or make you happy – whereas the truth would possibly make you worried or upset. Such an analysis may sound very patronising but it is a perception very widely held by Europeans. Could it be that the respondents, when they were working through the questionnaire, were looking for the 'correct' answers i.e. which answers would give most pleasure to the researcher and which answers would result in disappointment?
The author has a number of highly respected and valued Indian friends – some are still actively involved in seagoing careers, others are ex-seagoing and now working ashore in the shipping related industries. Their views were sought on this possible hypothesis – knowing that they would provide honest and objective answers. They all felt that there may be a little of that attitude of not wanting to cause offence by ticking the most appropriate box but, on the whole, they believed that the responses were accurate and could be relied upon. The author did not have similar direct contact with Filipinos but through intermediaries did solicit similar views and received similar answers.
 4. This leaves the fourth, and final, option – that they might actually be telling the truth and actually believe that the ISM Code can and is working. From reviewing narrative comments received and discussing the issue further with many individuals it would appear that many Indian and Filipino Masters and Officers see the ISM Code as providing a structure – a frame work – onto which they can build and secure their management systems. The way their systems are structured is such that the manuals tell them what they are supposed to do, they have access to and are directed towards relevant sources

which tell them how to do it and they have a system that will tell them whether they have done the task or performed the process correctly.

These initial findings were published as part of a preliminary report. Interestingly, a European instructor who had been running a training centre in the Philippines for many years contacted the author with confirmation that he agreed with the basic conclusions. Even more interesting was an observation / suggestion he went on to make, that if a similar analysis was undertaken by splitting the groups by age rather than by national backgrounds then a very similar result would be achieved. The questionnaires did not ask the respondent to declare their age and therefore such an exercise was not possible. However, a review of some of the most negative responses received would indicate certain clues that would suggest that the individual had been at sea for many years and in some cases probably already retired. The theory is perhaps supported by comments received from other respondents such as this Australian ship manager:

...my personal observation is that the 'old timers' are slowly coming around whereas the younger seafarers are much more open and accepting of safety management principles as it's covered at colleges and is also very much part of the working culture at least in other Australian industries...

If the theory of this European instructor from the Philippines is correct then again it perhaps creates additional hope for the future success of the ISM Code.

Another interesting experience was shared by a respondent who had first hand experience of both commercial shipping and the offshore industry. More than that though, within the context of this section, he had recent experience of providing safety-related training to non-OECD seafarers. He submitted the following report:

I have just completed a ... training programme - where I essentially presented an ISM/SMS and FSA appreciation programme with a number of our Far Eastern and FSU affiliates and inspectors (predominantly Polish, Russian, Ukrainian, Croatian and Filipino). Quite a number of these men/woman had recent experience as master and officer in a broad range of ships. There was almost unanimous support for the ISM/SMS regime throughout my courses. Their enthusiasm was striking. All gave evidence of its benefits and interestingly many noted that it facilitated greater interaction with owners/managers/superintendents. Again - without exception they experienced worthwhile involvement of the management of their working environment. Their enthusiasm unfortunately contrasts with the understanding of European seafarers as I have generally experienced it - the latter on the whole remaining skeptical of the benefits of ISM. I remember having similar feelings offshore before I had my "road to Damascus" - i.e. before I first recognized the real benefits of total safety management under the "safety case" regime offshore. Some of the cynics were shipmates - when I was deck apprentice and officer with ...(various British shipping companies)

As was suggested elsewhere – more research would appear to be warranted into the apparent differences in perceptions of ISM by various cultural groups.

7 Recent court decisions

In an attempt to bring alive the potential impact of some of the issues arising out of ISM implementation, in a practical way, it may be interesting to consider three recent court cases. These cases start to address some of those issues – in particular:

- ISM as the bench-mark against which operational good practice will be measured,
- Evidence and audit trails
- The test of ‘reasonableness’

The three cases to be considered are:

1. *The Eurasian Dream*

QBD (Com. Ct.) (Cresswell J)
- 7 February 2002

2. *The Torepo*

QBD (Admiralty Ct.) (Steel J)
- 18 July 2002

3. *The Patraikos II*

Singapore High Court
- 9 May 2002

All three cases were cargo related liability incidents where the issue under consideration was the question of ‘seaworthiness’ and whether the respective ship operators had exercised due diligence to make their ships seaworthy within the terms of the Hague Visby Rules.

To put this into context – let us first remind ourselves of the relevant section of the Hague Visby Rules - Article III Rule 1 and 2 which read:

1. The carrier shall be bound before and at the beginning of the voyage to exercise due diligence to –
 - a) Make the ship seaworthy.
 - b) Properly man, equip and supply the ship.
 - c) Make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage and preservation.
2. Subject to the provisions of Article IV, the carrier shall properly and carefully load, handle, stow, carry, keep, care for, and discharge the goods carried.

The initial burden will be upon the cargo claimant to establish a prima facie case of unseaworthiness and to demonstrate that they have suffered a loss as a consequence of that unseaworthiness. Article IV Rule 1 of the Hague Visby Rules provides that the carrier shall not be liable for loss or damage arising from unseaworthiness provided they can demonstrate that they ‘exercised due diligence’ to make the vessel seaworthy. What this means in plain English is that if the ship owner did all that they reasonably could to make sure that they provided a ship and crew that should have been able to deliver the cargo at destination in the same condition as it was in when loaded, then they will be entitled to rely upon certain exclusions and defences. There

is a list of 17 exceptions set out in Article IV Rule 2 – part of which is set out below with the exceptions most relevant to the case studies:

2. Neither the carrier nor the ship shall be responsible for loss or damage arising or resulting from –
 - (a) Act, neglect, or default of the master, mariner, pilot, or servants of the carrier in the navigation or the management of the ship.
 - (b) Fire, unless caused by the actual fault or privity of the carrier.
 - (c) Perils, dangers and accidents of the sea or other navigable waters.....
 - ...(q) Any other cause arising without the actual fault or neglect of the carrier, or without the fault or neglect of the agents or servants of the carrier, but the burden of proof shall be on the person claiming the benefit of this exception to show that neither the actual fault or privity of the carrier nor the fault or neglect of the agents or servants of the carrier contributed to the loss or damage.

The author believes that all three cases have direct relevance to ISM and provide valuable guidance from the courts on the way in which they will examine cases in light of ISM. However, it should be pointed out that the ISM Code was not mandatory on the *Eurasian Dream* or the *Torepo* at the relevant times when the incidents actually occurred. It would appear from reading the law reports that the respective Judges clearly had ISM principles in mind when considering the cases and when arriving at their judicial decisions. In the *Eurasian Dream* judgement it is said of the ISM Code that it is “...a framework upon which good practices should be hung...” and “...a prudent manager / master could very well organise their companies vessels work following those guidelines...” (*Eurasian Dream* judgement paragraph 143)

The factual information in the Case Studies below is based entirely on the respective law reports. Clearly by their very nature such reports must be selective in what factual information they include. It is always possible therefore that there may be some slight errors in fine detail – for which the author extends his apologies. However, the author believes that the main principles, which are the important features, are accurately represented. It is important to appreciate however that the case studies set out below are not intended to represent a full review of any of the incidents and anyone wishing to obtain full details of the judgements are referred to the relevant law report.

7.1 Case Study 1 – The Eurasian Dream

Brief Facts:

- The *Eurasian Dream* was a pure car carrier – of the large ‘box-shape’ design.
- She was discharging a cargo of new motor vehicles in Sharjah in the United Arab Emirates.
- A fire started in car deck number 4.
- The crew were unable to contain the fire.
- The ship was abandoned and towed off the berth.
- The ship and all the cargo were a total loss
- There were no serious injuries to personnel.

The basis of the claim:

- The cargo owners / subrogated underwriters were claiming for the damage to their cargo and other losses which they suffered as a consequence of the fire.
- The basic argument was that the ship was unseaworthy and that the carrier had failed to exercise due diligence to make the vessel seaworthy.
- Specifically, they argued that the ship was unseaworthy on many counts, including:
 - vessels equipment
 - competence of master and crew
 - adequacy of documentation

Before undertaking an evaluation of the evidence it is perhaps worth reviewing briefly what happened and what went wrong – the significance of the judges criticism should therefore make more sense.

During the relevant period the vessel was discharging cars. The third officer (3/O) was the duty cargo officer and he had an Able Seaman (AB) on duty with him. Both the 3/O's and AB's stories changed, on a number of occasions, as to exactly where each was at the time when the fire started – some versions said the 3/O was on the car deck and witnessed the fire start whilst other versions had him in the mess-room taking a snack. The 3/O did have a walkie-talkie radio but the other three sets on board were being used by the engineers who were involved in a bunkering operation. The 3/O had no means of contacting anyone else on his radio.

The cars were carried with minimum amount of fuel in their tanks and with their batteries disconnected. In order to speed up the discharging operation the shore stevedores had adopted a very bad and unsafe practice of pouring a small quantity of petrol into the carburettor of the vehicle and then jump starting the car from a powerful battery on the back of a pick-up truck. Invariably fuel gets spilt in such operations and with the sparks being generated from the battery leads there is a very high risk of a fire. Clearly such practices should be totally prohibited – there was no evidence that any attempts were made to stop the stevedores from carrying out this very bad practice.

It was not proved conclusively but the conclusion reached by the fire experts was that the fire probably started when some spilt fuel ignited. If a working fire extinguisher had been available then the fire should have been capable of being extinguished fairly easily and quickly. There were a number of partially discharged fire extinguishers found near the seat of the fire by the fire investigators – they concluded that the extinguishers had probably not worked properly.

It took a significant length of time before the alarm was raised and then there was much confusion as to where the fire was or what to do about it. By this time the fire was quickly spreading. The master ordered fire hoses to be run out – this proved to be ineffective. Breathing apparatus sets eventually arrived on the scene but these were too few in number and probably defective. It transpired that no serious or informed emergency practice drills had been carried out on board – particularly on the most basic of all potential emergencies – how to fight a fire. Eventually, the Master decided that the fire was out of control and he decided to get everyone ashore. Almost as a parting gesture he ordered the CO2 bottles to be discharged – since the very large loading door was open this smothering gas would have quickly escaped and would have been of no use. Local tugs pulled the burning vessel off the berth and allowed her to burn out in the relative safety of the outer harbour.

The method of fighting a fire on these types of vessels is very different from conventional cargo ships or bulk carriers. The ship is divided up into car decks vertically with a number of transverse bulkheads. In these bulkheads are gas tight

doors such that, in the event of a fire, the gas tight doors can be closed across adjacent bulkheads to completely seal small sections off. Of course any personnel in the compartment must be evacuated prior to closing the doors. Once the section is sealed - CO2 is injected and any fire would be very quickly brought under control.

There do not appear to have been any instructions on board on this procedure or how to operate the CO2 smothering or the gas tight doors. It does not appear that the Master, Chief Engineer or anyone else knew about the procedure or how to operate the CO2 system or the gas tight doors.

Evaluation of the evidence:

- The witnesses:

In a court case such as this there will be two main types of evidence to be presented – written / documentary evidence and witnesses. The witnesses will be either witnesses of fact – i.e. people who were actually involved in or around the incident, and expert witnesses – who are people with specialised knowledge or skills who can provide the benefit of their superior knowledge for the court to take into account when considering the evidence. The impression that a witness makes upon the judge can be very important indeed. If the witness starts changing his story during cross examination or for other reasons the judge starts to consider that the witness is not telling the truth then this will, inevitably, be very prejudicial to one side of the case. Witnesses can be put under considerable pressure during cross-examination – barristers / advocates are skilled in extracting the truth from witnesses. Consequently, the only way to be sure of successfully withstanding the interrogation of cross examination in the witness box is to be completely truthful and stick to the truth and the facts. Witnesses must avoid being drawn down the road of subjective speculation – however tempting that might be.

In this case the Master, as well as a number of officers and crew from the ship and the Designated Person from the office ashore, were called as witnesses of fact. A lecturer from a maritime academy, who taught fire fighting as one of his subjects, appeared as an expert witness appointed by the carrier and a Car Carrier expert was appointed as expert witness on behalf of the cargo claimants.

In his judgements the judge had the following comments to make about the different witnesses who had been presented from the ship operators side:

- The Master – Unsatisfactory
- Third Officer – Profoundly unsatisfactory
- Chief Engineer – Profoundly unsatisfactory
- Able Seaman – Profoundly unsatisfactory
- Designated Person Ashore – Most unsatisfactory
- Expert witness – Did not have relevant expertise.

During the cross examination of the witnesses a number of them started to significantly change their original stories to such an extent that the Judge was left wondering what he could or could not believe. In addition it started to become apparent that deliberate attempts had been made to tamper with important pieces of evidence – including an instruction from the ship manager's office to the Chief Engineer to return on board after the fire had been extinguished to adjust the position of certain valves before the fire investigator got onboard. Once a judge starts disbelieving witnesses it will

then be very difficult to restore sufficient confidence to resume a position of trust.

- Vessels equipment

During the course of the investigation and court hearing it became apparent that a number of important pieces of fire fighting appliances probably failed and other pieces of safety equipment proved to be inadequate. One of the major problems for the Ship Operator in defending the claim was that there were no records available of when fire extinguishers, for example, were examined or tested or recharged. This applied to a number of other items of equipment such as gas tight doors and CO2 smothering equipment. The expert witness who was put forward by the claimants was able to convince the judge that there was significantly fewer walkie-talkies on board than was actually needed. The same applied to Breathing Apparatus sets. There was no evidence of any risk assessments ever having been carried out which might have picked up on these deficiencies.

- Competence of master and crew

The Master's certificate of competency does not appear to have ever been called into question. However, his ability and qualifications to command a car carrier certainly were. The judge found the recruiting practices of this company incredible – to say the least. Apparently the ship managers needed a Master for *Eurasian Dream* and so they sent word to their manning agents in Manila to find one. It did not seem to concern anyone at the time but the Master they found had not sailed on *Eurasian Dream* before, or any sister ships, indeed he had never sailed on car carriers before – in fact he had never sailed with that company before. Apart from the manning agent, he had not met anyone from the company – he was just instructed to go and join the vessel. The only instructions he received from the company was a letter basically telling him to read all the manuals when he got on board. It transpired that there were well over a hundred manuals that he would have had to read. It was estimated that if he did nothing else apart from read manuals then he would need 2 to 3 weeks to complete the task. He was apparently given no specific instructions about safety procedures with regard to loading, carrying or discharging motor vehicles, he was given no instructions on how the CO2 system worked and, apparently, he wasn't even told of the existence of the gas tight doors or their purpose or how they worked. The ship operators were unable to produce evidence to describe any adequate procedures they might have had in place to provide relevant familiarisation or training. There was no evidence that the crew had ever undergone any meaningful emergency drills or exercises – such as fire fighting. A detailed quote from the judgement is set out in the subsection on the adequacy of documentation below.

It also became apparent during the examination of the witnesses and the documentation that none of the other officers or crew members had what could be described as an adequate knowledge or understanding of safe cargo operations on this type of vessel.

The judge concluded that the Master and crew were ignorant of:

- Fire hazards in car carriers
- The need to supervise stevedores
- Procedures for dead car operations
- CO2 procedures

- Gas tight door operation

- Adequacy of documentation

As was stated above, at the time of the incident the ISM Code was not mandatory for this type of vessel. Car Carriers are ISM Phase II ships and, consequently would have until the 1st July 2002 deadline to comply. The incident occurred on 23rd July 1998.

However, the particular ship managers who were operating *Eurasian Dream* also operated Phase I ISM ships and they had produced procedures manuals for those ships. It would appear that these were generic manuals apparently produced with the intention that they would apply to all of their vessels. It would appear that copies were put on board all their ships.

In his judgement, Justice Cresswell discusses this documentation in some detail. Although it is a rather long quote it is felt worthwhile setting it out in order that the full significance of what the judge was saying can be fully appreciated:

“151(12) – (18) ...It was of fundamental importance that the vessel be provided with a ship specific manual dealing with fire prevention and control. No such manual was provided to the Eurasian Dream.

The vessel was provided with a large amount of irrelevant and / or obsolete documentation. Such documentation related (for example) to vessels other than car carriers. Such documentation was potentially misleading. For efficiency and competence of response, only one code or set of procedures should have been prescribed for the Master of a pure car carrier.

The documentation placed on board by Univan was too voluminous to be digestible.

The Master was directed by a standard form Briefing Letter to read all the literature on board the vessel. This was an inadequate means of instructing the Master for the following reasons:-

- (a) it was not given to the Master in advance of his attendance upon the vessel.*
- (b) it did not cater for the special position of Captain Villondo, who had no prior experience of car carriage, car carriers, the Eurasian Dream or Univan.*
- (c) the direction of the Briefing Letter required the Master to read a vast amount of documentation, including Univan manuals which ran to hundreds of pages and about 100 technical equipment manuals.*
- (d) the task of reading the Univan manuals would have occupied 2 to 3 weeks of the Master's time whilst on board the vessel.*
- (e) the Briefing Letter ought either to have summarised all the key guidance to be given to the Master in relation to emergency procedures or to have directed him in a focused manner to the relevant manuals or parts of manuals dealing with such matters.*

The Emergency Procedures Manual (and the other Univan manuals) failed to give guidance as to:

- (a) the supervision of stevedores;*
- (b) the importance of gas-tight doors as fire-fighting equipment;*
- (c) the efficient use of the CO2 system (including the speed with which it should be deployed and the steps to be taken to permit such deployment);*
- (d) the evacuation of personnel.*

Instead the Manual contained guidance for fighting fire on other types of vessels. Such material was irrelevant and the Manual was 'put to one side' by the Master on this basis. However, if acted upon, the Manual was misleading and dangerous: it stated (for example) that, in the laden condition, there was little that the Emergency Response Team could do in the event of a fire and made no mention of any steps which might be taken to fight such a fire.

In accordance with SOLAS, fire-fighting instructions and procedures in particular should have been concentrated in one concise and clear manual, catering specifically for the Eurasian Dream. The Master himself complained of the fact that he had not been given such a manual. Univan should have provided the vessel with clear checklists of the essential actions to be taken in the event of fire: (a) at sea (b) in port.

The vessel was not, but ought to have been, provided with specific documentation dealing with:-

- (a) the characteristics of car carriers in general and the Eurasian Dream in particular;*
- (b) the carriage of vehicles in general and on the Eurasian Dream in particular;*
- (c) the danger of fire on car carriers;*
- (d) the precautions to be taken to avoid fire on car carriers, including:*
 - (i) instructions for the safe handling of second-hand vehicles;*
 - (ii) instructions for the supervision of stevedores and the prohibition of hazardous activities by stevedores or others, such as simultaneous and proximate jump-starting and refuelling operations in the same area or on the same vehicle.*
- (e) the importance of gas-tight doors in fire fighting;*
- (f) the importance of using CO₂ as a front line defence and without delay in the event of a deck fire and simple instructions for its use;*
- (g) procedures for evacuating the fire zones or keeping personnel out of such zones.*

A reasonably prudent owner, knowing the relevant facts, would not have allowed the Eurasian Dream to put to sea with the Master and crew, with their state of knowledge, training and instruction.

Even though the vessel did not have to comply with the ISM Code, the judge would appear to have adopted the position that since the procedure manuals had been put on board then there must have been an intention on the part of the ship operators to use them as the basis of setting up a SMS. Indeed at paragraph 151(12) the judge actually says that a fire fighting manual (which was not on board) should have been. The judge also seems to have adopted the view that the ISM Code had already set the standard as to the minimum level of ship operation and therefore adopted the general principles as a sort of benchmark. To what extent that is the case or whether it is speculation is somewhat academic now since the Phase II deadline has passed. In any event there can be little doubt, following a reading of the judgement, that the judge had the ISM Code very much in mind when he considered the evidence and the operational practices in this case.

The message which the judge is clearly sending out is that those ship operators who dump 'off-the-shelf', stereo-type manuals on their ships or otherwise pay only 'lip-service' to ISM had better look out. The courts are clearly alert to the intentions and philosophy of ISM as well as what it should be achieving in practice. Inadequate and inappropriate manuals may very well render the vessel unseaworthy. In paragraph 127 of the judgement, Justice Cresswell said:

“ Seaworthiness must be judged by the standards and practices of the industry at the relevant time, at least so long as those standards are practical and reasonable”.

The standards and practices of the industry in this respect are now the ISM Code.

It is also clear from this judgement that the Managers have a responsibility to ensure that the Master and crew are properly familiar with the ship and the cargo to be carried. In addition, the managers do not discharge their responsibility by simply providing large volumes of documents for the master to read.

The judge was very critical of the ship operator as well as the staff, both ashore and on board the ship. The judge concluded that the vessel was unseaworthy on account of an accumulation of serious problems to do with:

- The vessel's equipment
- The competence of the master and crew
- The adequacy of the documentation

On that basis the judge allowed the cargo owners to succeed with their claim.

7.2 Case Study 2 – The Torepo

Brief Facts:

- *Torepo* was a product tanker
- On a loaded voyage from Argentina to Ecuador via Patagonian Channel
- Vessel grounded
- Vessel had to be salvaged
- There were no serious personal injuries
- There was no pollution or loss of cargo
- The cargo owners attempted to recover their contribution to the salvage.

The basis of the claim

- The cargo owners / subrogated underwriters were claiming for a recovery of their contribution towards the general average / salvage expenses incurred in the refloating operation.
- The basic argument was that there had been a breach of the contract of carriage in that the ship was unseaworthy, and the ship operators had failed to exercised due diligence to make the vessel seaworthy.
- Specifically they argued that there were many factors which contributed towards that unseaworthiness, including:
 - no proper bridge team management,
 - no proper system for instructing crew in navigating in confined waters,
 - no proper passage plan for that part of the voyage during which the incident occurred,
 - the vessel was not equipped with adequate charts
 - the echo sounder was defective.

If the cargo claimants were successful with their arguments they would be entitled to recover their contribution to the general average and salvage expenses.

The case was heard before the Admiralty Judge – the Honourable Mr. Justice Steel – a very experienced lawyer and judge in shipping related matters. It is interesting to note that, in his judgement, the judge was clearly very critical of the way in which the claimants had set out their claim and their allegations. On the whole they were unspecific and unsubstantiated.

The judge was also very critical of the expert witness that the claimants had produced to comment specifically on the navigation systems and practices on board *Torepo*. Basically the judge considered the navigation expert to ‘lack realism’. This is actually a very interesting, important and enlightened observation on the part of the judge. The expert witness put forward a case for almost absolute perfection – Justice Steel – made it clear that neither he, nor the court, nor ISM expects perfection – but best practice will be expected. It again comes back to the old problem of reasonableness and what might be reasonable within the context of this particular case.

Before we venture off to evaluate the evidence, let us look a little at the background to this incident which happened in July 1997.

Torepo was a product tanker of about 25,000 tons deadweight and was more than 20 years old. She was, apparently, in relative terms – bearing in mind her age- a well maintained and well run ship – this was confirmed by 50 or more vetting inspections by oil majors which the ship had been subjected to during the three years prior to this incident.

On this particular occasion the vessel was close to Buenos Aires in the Argentine and was to load a full cargo of gasoline for Ecuador. It was recognised by the Master on board, and his navigator – the second mate, that there were at least three routes which the ship could take. They could go North and through the Panama Canal – this would certainly provide the best weather option at that time of year (mid winter in the Southern Hemisphere). They could go South which would provide at least two options: they could sail far South and go round Cape Horn – this would almost certainly involve bad weather. The third option was to cut across the tip of Chile and go through the Patagonian Channel. Up until the time of sailing the charterers would not make a decision as to which route they wanted the vessel to take. The second Mate prepared the passage plans for each of the three possibilities. However, he realised that they did not have on board all the appropriate navigation charts – in particular the British Admiralty charts that were being used on board did not adequately cover the Patagonian Channel. The charts required were local Chilean Charts. The master attempted to order the charts from the local chart agent in Buenos Aires – but without success. The ship managers tried to obtain them in Europe and the Master tried through the local British Admiralty chart agent in Montevideo, Uruguay. However, all these efforts were in vain – it transpired that these charts were only available inside Chile.

Torepo loaded the cargo and set sail – heading South. Eventually the charterers confirmed that the vessel was indeed to proceed through the Patagonian Channel. Local agents were appointed and the master ordered local pilots and also asked that the pilots bring with them copies of the relevant charts.

Evaluation of the evidence:

- The witnesses

The main witness of fact was the Master of the *Torepo*. The Master had served with the company for six years and had sailed previously on *Torepo* as Chief Officer. The voyage in question was the Master's first trip in command. It would be quite normal in such circumstances for the Master to try his very best to make sure that everything ran smoothly during the voyage. He would expect people, both in the office ashore and on board ship, to be watching him very closely and he would want to demonstrate that the decision to promote him to Master was a correct decision.

The judge found the Master to be "...an intelligent and capable man who responded to cross examination in a straightforward manner..."

The Master had clearly made a favourable impression on the judge who tended to believe him.

- Competence of Master and crew

As was explained above, the Master had sailed with the company for a number of years prior to the incident – and consequently he was familiar with the way the company ran their ships. He had sailed as Chief Officer on board *Torepo* and therefore knew the ship very well before he took command.

The cadet who was acting as lookout had three years experience at sea.

One week before the incident a vetting survey had taken place on behalf of an oil major. In addition to other things, the inspector noted: '...competence of personnel is no problem...'

- Vessel's equipment

The only item of equipment which the claimants drew attention to and alleged was not working was the echo sounder. They did not produce any evidence to substantiate that allegation. On the other hand the ship operator was able to produce documents to show that the equipment had been overhauled in dry dock only a week before the incident occurred. A certificate had been issued by the Classification Society confirming that there were no outstanding items and a detailed report of the dry docking had been prepared by a technical manager from the ship operator's office.

- Procedures and systems

The oil major vetting inspector who had attended the vessel the week before noted in his report: '...the standard of record keeping was very good with everything readily available... operational procedures on board were good...'

The Master wrote up standing orders and night orders and generally ensured that the company policy was being followed.

The officers of the watch seemed to be aware of the company policy and also read and signed the standing orders and night orders.

A 'Navigational Procedures Manual' was in use on board along with the 'Bridge Procedures Guide' published by the International Chamber of Shipping.

Proper passage plans had been prepared to cover the possible alternative routes that the vessel might take.

When the vessel sailed from Buenos Aires she did not have the correct charts on board for the Patagonian Channel – however, these were brought on board by the local pilots who had been engaged to advise the Master during that passage.

The passage plan and general exchange of information between Master, Pilots and Officers of the Watch did take place.

Prior to the incident the Chief Officer had been monitoring the progress on passage including plotting the vessel's position on the chart at regular intervals and using 'Parallel Indexing Techniques' on the radar to check distances off the nearest land.

The Incident

At 0600 hours, on the day of the incident, the vessel was proceeding on her passage through the Patagonian Channel. Everything was proceeding smoothly. The Master was in his cabin resting – he had left night orders to the effect that he should be called if the Officer of the Watch was in doubt about anything or otherwise needed the Master. The Master was intending to return to the bridge at about 0800 hours when the ship would be transitting a particularly difficult part of the Channel. On the bridge was the Chief Officer, one of the two local pilots (the second pilot was also resting), a helmsman and the cadet officer / lookout. During the course of a few short minutes a whole series of mistakes were to happen.

A major alteration of course was being approached. The Pilot went to mark the ship's position on the chart and to transfer the position onto the next chart. As he did that he realised that the latitude and longitude positions did not coincide with the position of adjacent land and islands – in fact there was a difference of one mile. There is nothing particularly unusual about this sort of thing happening – often the surveys on which original charts had been drawn took place many years before and precise positions may have been difficult. However, this was sufficient to distract the pilot's attention for a few minutes. The Chief Officer realised that the alteration position was being approached but, presumably, by this time had developed a certain amount of confidence in the pilot and had assumed, wrongly, that the pilot must have been delaying the commencement of the turn on account of some local current or similar. The cadet / lookout saw a light open (become visible) but did not report this. In fact this was the light that should have indicated to the pilot when he should turn. By the time the pilot realised that he had over-shot the alteration position the vessel was closing quite rapidly on an island dead ahead. If an attempt was made to alter course at that stage then there would be a serious risk of ripping the side out of the ship which could result in loss of life or personal injuries, an explosion / fire, pollution, loss of cargo and possibly loss of the ship. Instead the correct course of action was taken, apparently without panic; as much speed as possible was taken off the vessel and she was driven straight onto the island. The greatest strength in the ship is in her bows where there are stiffening frames plus a collision bulkhead.

The vessel ran aground at a speed of about six knots. No one was injured, there was no explosion or fire, there was no pollution and no loss of cargo.

There was damage to the ship structure at the forward end but a salvage tug was able to safely pull the vessel off the island with no further loss or damage.

In his conclusions the Judge stated: "...the claimants have failed to establish that the casualty was occasioned by causative unseaworthiness ...their claim accordingly fails..."

The witnesses and the documentary evidence were sufficient to satisfy the judge that, although relatively old, this was a well run ship with a company and crew who were trying hard to implement and follow good practices i.e. trying hard to

make their SMS work. In fact this incident occurred ahead of the Phase I ISM compliance deadline and therefore the preparations were still being made to have a fully verified ISM system in place. The author is in little doubt, having studied the judgement, that the judge did have ISM principles very much in mind when evaluating the evidence and considering what might be the correct level of operational practice.

What had happened in this case was a series of mistakes, human errors, which all occurred at the same time in the same place. They were errors in the navigation / management of the vessel. There was no evidence to indicate that similar errors or mistakes were a regular feature on board this ship – rather what happened was a most unfortunate, sequence of mistakes. Whilst these are the authors words and not those of the judge it is clear that whilst human being are employed on board ships they will, occasionally, make mistakes – to err is human! Neither the courts nor the ISM Code expect perfection – mistakes will be made. We must use these mistakes as learning opportunities to make sure similar things do not happen in the future. Provided everything else indicates that those involved are trying hard to implement proper safe systems then they should not be punished because of an isolated mistake.

Of course it may not always be possible to exonerate someone who has made a mistake – particularly in cases of ‘strict liability’ – for example pollution incident. However, even in such cases, if a ship operator is able to produce witnesses and documentary evidence that, ordinarily, they have very good pollution prevention procedures in place and these are very carefully followed – such that the present incident really was a ‘one off’ then the fine that may be imposed is likely to be at the lower end of the scale.

7.3 Case Study 3 – The *Patraikos 2*

This case was heard in the High Court of Singapore. The relevant facts of this particular case are quite short and again whilst this cannot be accurately described as an ISM Case – it does have a number of very important ISM related implications.

Patraikos 2 was a large container ship that ran aground on what is probably the most powerful lighthouse in the Southern Hemisphere – Horsburgh Lighthouse. The vessel was aground for 103 days and then taken to Singapore for repairs. She remained in Singapore for another three months. Repairs cost approximately US\$4 million. Most of the lost time would probably not have been insured.

The cargo owners were claiming for various categories of loss and damage to their cargo as well as their contribution to the General Average / Salvage costs. They claimed that the vessel was unseaworthy at the commencement of the voyage on account of the utter incompetence of the second mate who was navigating the ship at the time of the incident. The ship operators argued that they were entitled to rely upon the error of navigation as a defence under the Hague-Visby Rules. The cargo claimants went further and argued that the vessel owner had failed to exercise due diligence in checking on the background, training and qualifications of the second mate before he was appointed.

The ship operators were unable to produce any meaningful procedures in which their recruitment policy was set out. Nor were they able to produce any evidence to show that they followed good and safe practices in the recruitment of the second mate in question.

The second mate was called as a witness in the High Court and the judge had this to say of him... “(he was)...clearly incompetent whose testimony in the witness box shifted like the sands when washed by the tides, depending on his moods...” [see *Owner of the cargo laden or lately laden on the ship or vessel Patraikos 2 v The owners of the ship or vessel Patraikos 2*, Admiralty in Rem No 81/96, High Court of Singapore, 9 May 2002)

The court held that the vessel owner failed to exercise due diligence in checking on the background, training and qualifications of the second mate before he was appointed.

As such, the vessel owner was not entitled to claim the ‘Error of Navigation’ defence.

7.4 ISM Lessons to be learnt

These three case studies will help put into context the full significance of ISM implementation. They will hopefully clarify a number of the misunderstandings and misconceptions that arose during the research behind this book.

By a process of extrapolation from the cases – the author would suggest that the following are the major issues to come to light:

- The court will scrutinise the SMS and the documented systems very closely – anyone who believes they can get away with only paying lip service to ISM is seriously mistaken.
- It is unacceptable for a Shipowner / Shipmanager to dump ready made procedures manuals on board a vessel and just expect those on board to ‘... get on with it...’ If any Company, or individual believes that this applies to them then they will need to consider their position very carefully and implement major corrective action immediately.
- Voluminous, and particularly irrelevant manuals are likely to be criticised by the court – if any Company or individual, on reflection, believes that their procedures and checklists and such like would be criticised by a court because of this reason then immediate corrective action needs to be put in place.
- The recruiting, vetting, familiarisation and training of sea staff is likely to come under very close scrutiny – particularly when an incident occurred because of some ‘human error’. A Company needs to examine its own human resource systems and procedures and satisfy itself that they are tight enough to withstand detailed interrogation should an individual Master’s or seafarer’s actions lead to a court case – whether in a civil or a criminal action. What evidence is likely to be available to prove that proper vetting, familiarisation and training procedures were indeed followed on each occasion?
- The evidence which will be required will not be limited to the particular incident – rather evidence will need to be produced that good procedures were in place and that, for most of the time, those procedures were being correctly implemented and followed. That the incident that had arisen was an unfortunate accident – an isolated incident - a one off. The Company needs to

ensure that proper records are kept in such a form that they could be produced in court if needed.

- Neither the Courts nor the ISM Code expect perfection – people will still make mistakes. However, provided the Ship Operator can demonstrate that they had good systems in place and all involved were doing their best to properly implement their SMS then they should not be punished or penalised unreasonably by the Courts. The extent to which a Company or an individual can prove this will depend almost entirely on good accurate records having been maintained.
- Although not specifically addressed in the Court cases under consideration, it is suggested that the court will not only expect certain things to be produced as evidence but will also expect audit trails to be capable of being followed. The audit trails should prove whether or not the correct procedures were being followed. The audit trail should bring to light what went wrong with the system and, consequently, why the incident occurred. Reports of similar incidents – whether they be accidents, hazardous occurrences or non-conformities will be examined – as well as the corrective action taken will be scrutinised. If such reports exist and the proper corrective action was taken, even though another incident has still occurred, these reports should help the Ship Operator's defence. If the claimants / plaintiffs produce evidence of previous incidents which had not been reported then this will be seriously prejudicial to the Ship Operator's defence – since it would demonstrate that there must be acute problems with the SMS itself.

The view of the author – based on a study of these recent court cases, is that the Court recognises that accidents will still occur. If a Ship Operator has made a proper commitment to ISM, including motivating the personnel who will be implementing the systems and can demonstrate that they are doing their best, then ISM will be the best friend they could possibly have. If the Ship Operator has bought an 'off the shelf' system – or otherwise put on board an unmanageable system and / or failed to motivate the personnel into implementing the system, then ISM will be the worst enemy they could ever imagine.

In an attempt to bring this matter into some sort of context, consider this next report from an Indian Chief Officer who described in a very honest and open way the meaningless rituals he goes through to suggest on paper that the SMS is being implemented, whereas in practice it is just a fudge or façade. He describes the situation this way:

It is no doubt that ism has improved working standards in the ships, but still the paperwork that ism requires (especially our company wants a work-plan, work-done weekly, bimonthly and monthly) most of the time we tend to fill up the papers rather than actually checking things or verifying. In this process, I feel there is no use of ism if people are going to find loopholes in this system and still do things in their own way. I believe this paper work req by the company is little too much that many times I make work plans for those work which never existed and again make work-done reports for those work done (which actually were not) this is because of fast turnarounds. Since I work in Indian company, and also come to know that many of the Indian companies follow the same procedure. The very basic safety policy of the company if u see will be the same

for most of the companies whereas it should be specifically made for each companies by the shore staff. Even the words are so same, many companies just copy the safety manuals from some other company's and sometimes forgetting to erase that company's name and put their name. I sincerely hope that this situation will be changed soon and something will be done about this, otherwise like the IMO chief said "don't make ism just a paper work" will be continuing.

A number of obvious and logical questions arise:

Does the Ship Operator actually know that such practices are taking place?

Does the Ship Operator approve / condone such practices?

Has the Ship Operator tried to persuade the seafarers to behave in a different way?

Presumably audits would pick up the irregularities. Clearly such practices go to the very root of the SMS and even though DOC's and SMC's might exist as pieces of paper they are meaningless – indeed such a SMS must be considered seriously deficient and non-compliant. The potential consequences for the ship operator could be very serious indeed. If an incident did occur which necessitated professional investigators to look at what may have led to the incident and they uncovered the practices being revealed by the Chief Officer – it is the ship operator who would have a lot of questions to answer. A court or inquiry would almost certainly conclude that, if causative, the ship was unseaworthy and the ship operators had failed to exercise due diligence to make the vessel seaworthy. The ship operators would, probably lose their Hague-Visby defences and maybe even their insurance cover. It would be no excuse to say that they did not know what was going on onboard their own ships – their system should have brought the irregularities to light at an early stage.

There are still many issues which the Courts need to address in connection with ISM to perhaps demonstrate the full significance and potential consequences of a Ship Operator, and those involved in the implementation process, failing to comply with the requirements of the ISM Code. There are two scenarios, which are closely connected, which the author anticipates will be issues to be addressed by the courts in the not too distant future:

1. The question of whether a Shipowner who has been found to be in serious breach of ISM requirements will still be entitled to rely upon his right to limit his financial liability on a tonnage limitation basis – or will they be exposed to unlimited liability?
2. The question of whether a Shipowner has breached the terms of his insurance cover – whether H&M or P&I – as a result of serious non-compliance with the requirements of the ISM Code. Could a Shipowner find that he is exposed to a very large claim and has no insurance cover?

In both cases it is quite possible that the role of the Designated Person – and in particular the implied state of mind of the 'highest levels of management', will come under very close scrutiny and will need to be considered by the court.

In addition to the above two 'civil actions' it can easily be imagined that if another major pollution incident occurs – or worse still a major passenger ship or ferry incident with loss of life, the ISM systems will again come under very close scrutiny

by the Criminal Courts and Corporate Manslaughter is a very real possibility. A whole host of other criminal sanctions - potentially involving very large fines and lengthy prison sentences await those convicted. The Ship Owner and senior levels of management, as well as the Designated Person, are probably exposed as well as the middle managers and superintendents in the office and the Master and officers on board ship. This will clearly vary from one jurisdiction to another. The point is though that the court will look at the way in which the ISM systems had been set up and implemented. For the very same reasons as those identified in the civil action cases – the ISM Code will be the best friend a Company or an individual could possibly have or the worst enemy they could ever imagine.

Each Company and each individual needs to look carefully at the ISM system with which they are working, even though they may have the DOC's and SMC's proudly displayed on the bulkhead, and ask themselves whether it complies with the following mantra:

- *Say what you do*
- *Do what you say*
- *Show that you have done what you said that you do*

If the answer is an unhesitating YES then fine – such a Company or individual probably has nothing to worry about. If the answer is NO – or there is SOME hesitation – then very serious thought needs to be given to consider what corrective action is needed without further delay.

8 Conclusion

Many of the findings of the survey could perhaps have been predicted in advance. Many Companies, and individuals, are experiencing difficulties with their implementation of ISM – paperwork and lack of resources are particular problems. However, the research has brought to light a number of new and relevant issues that can provide the basis on which future progress can perhaps be built. Some of the national / cultural issues are of particular potential interest. There were also areas of considerable concern which have been highlighted – serious misunderstandings about the Code which seem to be widely held by many seafarers – particularly from the more ‘traditional maritime nations’.

One fact which should never be lost sight of is that seafaring is, by its very nature, a dangerous occupation. An article appeared in the medical journal *The Lancet* on 17 August 2002 which drew attention to some recent research by Dr. Stephen Roberts at Oxford University. It concluded that fishermen and merchant seafarers have by far the most dangerous jobs in Britain. The researchers found that people working on the sea are up to 50 times more likely to die while working than any other occupation.

It is a sobering thought to realise that seafaring is not only more hazardous than construction and manufacturing industries but also a lot less safe than working for the police, army or fire brigade!

Dr Roberts analysed official death statistics from a range of different professions between 1976 and 1995 – his ‘top ten’ most dangerous jobs – in decreasing order of severity were:

- 1) Fishermen
- 2) Merchant seafarers
- 3) Aircraft flight deck officers
- 4) Railway lengthmen (sic.)
- 5) Scaffolders
- 6) Roofers and glaziers
- 7) Forestry workers
- 8) Quarry and other mine workers
- 9) Dockers and stevedores
- 10) Lorry drivers

(*The Lancet*)

8.1 *The Good, the Bad and the Ugly*

One thing that the survey confirmed is the very wide spectrum of compliance that exists across the industry. It would appear that most Companies and ships which require DOC’s and SMC’s do have their pieces of paper but few would actually seem to have a properly functioning Safety Management System.

In a paper presented at the IMAREST Conference in May 2002 Brian Orrell of the UK based officer’s union NUMAST made the following observation:

We believe the implementation of the ISM Code today has merely served to confirm that the good ships are good, mediocre ships are mediocre and the bad ships remain bad.
(Orrell)

A similar experience was reported by Jorg Langkabel of DNV who found that after 2 ½ years post Phase I implementation three types of companies emerged after certification:

- Those with perceived benefits (e.g. improved operational performance; reduced volumes of insurance claims, improved efficiency, reduced costs)
- Those simply meeting requirements in an average way
- Those who struggle and / or could not see the purpose.
(Langkabel)

One further example of a very similar observation was received from a marine surveyor on the West coast of the USA:

The better shipping companies have probably become better as the routines have been refined and as each occurrence has been investigated and action taken to prevent/minimize recurrence.

The inferior companies have become worse, cutting corners with poorly trained crews and where the senior officers are counting the days to come ashore and/or retire.

Commercial pressures to meet schedules in the North Pacific override good seamanship all too regularly.

Container ships are scheduled to arrive at a terminal by the hour.

There are individuals who seem to hold the view that ISM is the greatest curse ever inflicted on the shipping industry whilst others believe that it has been the greatest blessing. There were many in between. What the survey has hopefully demonstrated is that questions such as whether or not the ISM Code is, or can, work are really not the appropriate questions to ask. The ISM Code is identical, word for word, for every Ship Operator, every ship and every seafarer around the world. What is different and what the questions should focus upon, is the individual, specific, Safety Management System. It is the SMS which differs from Company to Company and from ship to ship. It is quite clear from the results of the survey that there are some very good SMS's in place and working, thus producing some excellent results, apparently, including increased profitability. On the other hand, there would seem to be other SMS's which probably have no chance of ever working and which should be consigned to the ocean-deep.

A tanker Master shared his nightmare experience:

Questions answered basis last vessel 40,000 mt DWT product tanker.

Absorbed into management 5 months ago. Previous operators – Greek. Now crewed by British Captain and Chief Engineer, all others Ukrainian.

None of the crew familiar with the company. Vessel operated on an interim SMC provided within a leading Classification Society [name of society was provided] . Vessel in extremely poor condition, illegal in all aspects of Marpol regulations due failed equipment. All Class certificates valid despite serious defects. Vessel should not have been trading. Ukrainians do not have any concept of a safety ethos. Function of ISM was nil and

impracticable. ISM detracts from safety on that vessel due to the time required of master.

A number of similar horror stories were sent to the author. Clearly a related matter of great concern also immediately arises as to why the seafarers, professional mariners, felt obliged to sail on such a ship. There was certainly no indication from the report that the situation was brought to the attention of the Authorities. The suspicion would have to be that we are again back into the fear and blame culture in a big way.

It is interesting to consider the views of some external observers – such as this pilot who seems to have formed a most unfortunate view of the way in which many companies may have implemented their SMS:

... my overriding impression of ISM (and similar safe ship management systems for non ISM ships) is that, with a few honourable exceptions, they are regarded as a means of "demonstrating" that shore based management has done their bit and that if anything goes wrong it must be the fault of the Master and crew.

Much more needs to be done to track down the good SMS's – to analyse them and understand what it is about them that makes them good. How have those Companies managed to motivate their team to embrace their SMS and fully implement it. When we read a claim from the chief executive of a shipping company such as this – we should hope that he and his company would be prepared to share some of their experiences and achievements for the benefit of the whole industry:

Ships staff now understand that they are listened to and are eager to learn and do the best that they can. They own the ISM system and are part of the management team.

Perhaps we need to be able to quantify the improvements in efficiency and profitability to persuade some parts of the industry that it really is worthwhile making the commitment. There are many lessons that can be learnt from others within the shipping industry. Having said that, it is not the view of the author that any one company should slavishly copy the SMS of another company. The suggestion is that we can learn and understand the methodology adopted and see whether that can be applied to our own situation.

There would appear to be a need to improve the standard of education of some of the very concepts behind the ISM Code to many seafarers as well as Ship Operators – particularly to those who are perhaps outside of, or beyond, the formal learning systems i.e. those who are unlikely to be attending college or other training establishments.

Further research will be necessary to understand fully the apparent major differences in perception of ISM between different national / cultural groups. If the findings of this survey are confirmed then the opportunity must be taken to capture and develop the enthusiasm for ISM, as shown particularly by Indian and South East Asian seafarers.

Of course ISM cannot, and was never intended to be, a substitute for employing experienced and well qualified people – but it was intended to complement such ideas in an industry which might have experienced a shortage of such individuals for a while. Whilst the author might not fully agree with everything this Chief Engineer says – he has certainly identified a key issue:

ISM I feel has been introduced to bring standards up for flag of convenience vessels.

For vessels already operating safely I feel it is another layer of inspections / paperwork.

Different standards between countries appear to exist.

It is reducing the ability of the individual. Relying more on the system.

At the end of the day it's the ability of the individual that counts and when people realise that to employ the right people will ultimately cost more but save money in the long run – then a safer environment will occur.

An investment in people is an investment in safety – and an investment in both has to be extremely good for business.

On a similar theme – there are some who believe that ISM is trying to replace already good systems – as the following Staff Captain of a Passenger ship explains:

“When I first went to sea in Elder Dempster Lines (in 1952) they had a Blue Book which all company officers had to follow to the letter. This included distances off various points like Finesterre where there was heavy traffic / fishing boats. Companies courses and a host of sensible instructions, which you ignored at your peril. In other words a bible of common sea sense. Now the ISM Code in my opinion is so onerous and long winded, that it causes good officers to cook the books to get it over with. Voyage planning becomes a joke if destinations are constantly changed as on this vessel, work / rest hours is also a joke. The officers seem to be just paper work donkeys who become exhausted physically / morally on this triumph of fantasy over reality.

There is little doubt that some old established shipping companies had some very good systems and procedures already in place which pre-dated ISM by many years. Those Companies should have experienced very little by way of change when they had to formally adopt ISM. A few ‘t’s crossed here, and ‘i’s dotted there. If substantial changes have been made to systems which were already ‘good’ – particularly if they were already structured on written procedures - then questions should be raised as to why it was felt necessary to make substantial changes and on whose instructions such changes were made.

The problem was that many of the newer companies and seafarers didn’t have a pre-existing ‘bible’ and some didn’t even come from such a tradition. It was therefore necessary for those companies to write down their best practices or, in appropriate cases, identify what is industry best practice and create a new bible. Of course such written procedures must be under constant scrutiny and must be adjusted or changed as part of the cycle of continuous improvement.

There was also a perception, amongst some, that it is not the ISM Code at all which is the real cause for improvements in safety - or any other IMO influenced legislation – rather it is because of other commercial influences. An Indian chief officer on board LPG ships explained it as follows:

*More than ISM it is the commercial pressure that has made my ship safe –
In one years time we have about 3 Port State Control inspections and 8 oil
major and terminal inspections.*

This is certainly an interesting point – for sure Shipowners realise that if they do not meet the safety and quality standards of the potential charterers then their ships are not hired, if they are not hired the Shipowner doesn't earn any money. Whatever the underlying motivating factor might be, perhaps isn't that important compared with the realisation that the same end result is achieved. Presumably, those Shipowners who operate ships which are not subject to oil major and terminal inspections but have still successfully implemented a functioning SMS had other motivating factors which encouraged them to comply.

Those who may still believe that they can get away with only paying lip service to ISM will need to take careful heed of recent judgements being handed down by the courts. No one seriously expects the ISM Code to prevent every single accident. Whilst human beings are involved in operating ships there will still be occasional accidents. A properly implemented SMS will help to reduce accidents to a minimum but it is part of a cycle of continual improvement. However, neither the courts nor the ISM Code expect perfection. Provided serious attempts are being made to implement a good SMS, and this can be proved, then the ISM Code will be the best friend a Ship Operator could hope for. If the Ship Operator is doing nothing more than the minimum in order to obtain a DOC and SMC then the ISM Code is likely to be the worst enemy a Ship Operator could ever imagine.

8.2 Overcoming conflicts

It became very clear as the research progressed that in many ship operating companies there seems to be a divide – an 'us-and-them' type attitude. Clearly the need to have common objectives between the ship and the shore is crucial to ISM having any chance of being successfully implemented. Presenting a paper at the INMAREST Conference in London in May 2002, Captain Barry Cuneo, a serving ship master, described one major conflict in the following, very powerful terms:

Ask any Manager what his company's objectives are ... they would be something like:

- 1. Profitable business*
- 2. Efficient operation*
- 3. Minimum breakdowns*
- 4. Minimum accidents*
- 5. Zero pollution*
- 6. Minimum costs*

Ask any modern, international crew member employed through manning agents worldwide, how their priorities stand. They would most surely state:

- 1. Good pay, on time, relatively better than compatriots on other vessels*
- 2. Good food, plentiful in supply without restrictions*
- 3. Mail / e.mail on time and accessible*
- 4. Leave when due, without delays due to lack of relief*

We must of course keep matters in perspective and never lose sight of the fact that Merchant ships are usually part of a commercial venture. The Shipowner uses the ship to earn freight or hire by carrying cargoes or otherwise generate funds by carrying passengers or some other gainful activity. There is certainly nothing wrong with this – indeed the author and probably the vast majority of the readers of this book derive their livelihood, either directly or indirectly, from this simple economic reality. Most ship operators are not themselves charitable organisations – they are invariably in business to make a profit – but not necessarily at any cost.

Of course in the operation of their business and their ships they must comply with a very wide range of Rules and Regulations – often involving safety related issues. The more perceptive ship operators realised that, irrespective of any Rules and Regulations, it actually makes good business sense to operate their ships safely. Consequently they could see that making adequate resources available to ensure that their ships were operated safely represented a good investment. Some ship operators may still need to be convinced of the wisdom of such prudence. The ISM Code however, makes it a requirement that adequate resources are made available. Section 3.3 states:

Company responsibilities and authority

3.3 The Company is responsible for ensuring that adequate resources and shore-based support are provided to enable the designated person or persons to carry out their functions.

Of course in the real world ship operators do not have bottomless pockets – freight rates and charter hire rates have been seriously depressed in many markets for a considerable length of time. Resources are finite and they are limited. Many ship operating companies have invested heavily in developing and implementing their SMS – others may have paid only enough to buy a set of manuals and a DOC and SMC from a friendly Flag State. Of course the costs involved with ISM are not limited to the initial setting up costs. The SMS needs to be constantly maintained - which will require adequate funding. There were many respondents, particularly seafarers, who were suggesting that the limited funding which was being made available for implementing or maintaining the SMS was not being made available where it was most needed – i.e. on board the ship. There was a certain amount of consistency in the comments coming from many individuals quite independent of each other and it would perhaps be worthwhile considering some of their comments below:

“ISM has increased the number of superintendents ashore, whereas number of people on board remains the same or reduced.

Without increasing the number of people on board (specially in the short sea trading area) the objectives of ISM cannot be achieved.

Authorities should understand that small ship and short sea passage does not mean small number of people to run. Hours of monitoring the ship is still 24 hrs. a day, 7 days a week...”

(Second Mate – small tanker)

“ISM has generated a mass of additional paperwork which has necessitated employment of an additional manager ashore, but no relief from the extra burden on board.”

(Second Engineer)

“In my opinion, looking at the overall picture, implementation of the ISM Code has meant an incredible increase in paperwork and workload, with very little improvement in safety, and quality of work / services etc. Yet again the seagoing staff have an extra workload whilst offices ashore employ additional staff for implementation / management of ISM Code.”
(Second Engineer)

Whether these perceptions are fair or not is somewhat irrelevant; the fact that they are so widely perceived at all is cause for concern. The question which obviously arises is where the management resources are being channelled, whether more needs to be done to explain to the Seafarers the rationale behind the decisions as to where the resources are allocated and whether indeed the Seafarers might have a very valid point.

A few years ago, on the administration side, it was not unusual to carry a Purser or Chief Steward who would undertake much of the ships paperwork. Such individuals started to be made redundant and the Radio Officer started to undertake much of the paperwork – in due time that rank was also considered surplus to requirements and a ‘luxury’. The paperwork and additional administration tended to end up with the Master and possibly shared amongst other officers who remained. The technical side of the Radio Officer’s job was also shared out amongst those remaining. The Electrician was to share a similar fate on board many ships. A passenger ferry master not only laments such events but questions the economic justification:

...there is a lot of extra paperwork for the master and no one to help. If the Radio / Electronics officer were back – he could help with all this as well as saving the company lots of money by being able to maintain electronic systems which most electrical officers cannot fix.

A Canadian Master has a few additional hats he is expected to wear:

Along with being the Captain, chief steward, 3rd Mate, radio officer, writer I am now expected to be the ships political officer and lately cruise director (e.g. how do you motivate your crew re-ISM)

The author does not have sufficient information to determine how extensive these sorts of perceptions might be. What he would say though is that they should be taken very seriously because they are the source of feelings of conflict and lead on very quickly to engendering a sense of ‘us and them’ which is not at all healthy when the movement should be towards team building. Such attitudes can be divisive and distract attention away from the serious matter of managing safety. It may well be that resources really did have to be directed towards sponsoring shore based positions – if that is the case it would be much better to share the reasoning with the sea-staff rather than allow allegations of ‘cronyism’ to fester.

Interestingly, with regard to the clerical / secretarial issue - the author was advised, by two quite independent sources, that a cost effective and viable solution had been found to this problem. The companies concerned had started to employ Indian clerks who had been trained within the Indian Civil Service, or similar background. The Clerks had excellent secretarial skills, were methodical, efficient and meticulous and were able to take the burden of routine paperwork off the shoulders of the Master and other officers and allow them to get on with running the ship. In relative terms the clerks

were well paid compared with the salaries they could expect at home but were modest when compared with the salary of a qualified officer. This is not intended to be any sort of statement by the author on the moral / ethical issues which might be involved – only pointing out that at least two shipping companies have gone down this route and it has apparently contributed significantly to their ability to more effectively implement their SMS and consequently make their ships safer. When we hear the desperate pleas of some of the respondents, such as the British Master quoted below, the industry must take these matters very seriously indeed:

The paper work brought about by the code, QA, etc. has reached a point where their very existence is causing a burden upon ship masters, particularly in coastal trading, and certain areas need to be rationalised to stop the proliferation of forms, surveys, audits etc. It seems to be forgotten that on manning scales that exist, ship masters have to be bridge watchkeepers as well and do not have the time to be full time office type administrators.

One of the serious conflicts, which had been anticipated and which was confirmed was 'self preservation versus public interest'. Public policy demands safer ships and cleaner seas – and the author would suggest that the overwhelming majority of the World's seafarers and ship operators would like to achieve that noble goal. However, we seem to live, or at least we perceive that we live, in a world of blame and punishment. The ISM Code can provide an opportunity to achieve that noble goal of safer ships and cleaner seas – but to get there we need transparency and an openness which will allow us to identify where the real problems are and to deal with those problems. The perception, on how to deal with the problem, of many in the society in which we live, is to punish the apparent offenders rather than looking at the real causes and dealing with the problem at that level. The ship operators and even their Masters and officers are fined and sometimes imprisoned by the authorities and the courts when an accident occurs. Masters and officers are sacked or demoted or overlooked in any future promotions – or at least they perceive they will be. As a consequence some are finding it very difficult to get through that deeply entrenched barrier to start moving towards the development of a no-blame safety culture. One of the leading headline articles in the October 2002 issue of Fairplay reported on a very prestigious ship management conference which had just been held in Cyprus where most of the leading Shipmanagers of the world were either speaking or attending as delegates. An extract from that article appears below:

ISM is dog's breakfast, says Grool

"ISM is a dog's breakfast," Wallem group MD Rob Grool insisted this morning on the final day of Ship Management 2002 in Cyprus. His speech yesterday caused such discussion that today's chairman, V.Ships MD Peter Cooney, invited him back to face more questions from the floor. "If a safety management system concentrates on documentation and covering backsides, it is a loser," Grool told delegates yesterday. "I do not agree with the way ISM is turning into a fault-finding thing that can be used against you in a court of law," he said today. Martin Hernqvist, loss prevention officer of the Swedish Club, said: "We've handled thousands of claims since 1998, but we haven't seen any punished because of ISM." Cooney asked delegates whether they believed the Code has been successful, and the vast majority thought it had. "I look forward to [North of England P&I Club associate director]

Phil Anderson's study on whether ISM has made shipping a safer industry," said Grool, "but I have my doubts that it has."

It would be very easy to quote Mr Grool out of context and to possibly misunderstand what he intended by such comments. Indeed, one might ask, how can any ISM system possibly work within a ship management company where the chief executive appears to have such negative views – particularly in light of paragraph 6 of the Preamble to the Code: 'The cornerstone of good safety management is commitment from the top.' The author has had the privilege of exchanging some views with Mr Grool on some of these issues. The impression made was that Mr Grool was not criticising the ISM Code *per se* but rather he is drawing attention to these conflicts which exist as a result of pressure from 'the authorities', potential claimants and their lawyers. He sees these pressures as being so great that they are basically stifling any possibility of the transparency and openness which would be required from ever developing – people and companies proceed automatically into self preservation mode.

In July 2002 the Chief Inspector of Marine Accidents at the Marine Accident Investigation Branch (MAIB) in the UK – rear Admiral John Lang retired and in his farewell message, in the foreword to the 2001 Annual Report, he said that he had one overriding regret:

It is with great sadness to note how few other flag states around the world have full-time marine accident investigation organisations that are able and prepared, to conduct independent in-depth marine accident investigations and make their reports publicly available. I think safety at sea, and the lives of everyone afloat including passengers, could be improved if steps were taken to correct this weakness as a matter of some urgency.

Admiral Lang believes that the reluctance on the part of many flag State Administration to do more stems largely from the lack of transparency in the international shipping community.

He also refers to a climate of 'fear' operating within the industry. An ambition of Admiral Lang had been the establishment of a facility for confidential reporting of safety issues which he believed would help overcome such fear and allow a level of transparency in. The Admiral went on to say:

The blame culture is prevalent throughout the industry, and mariners are genuinely frightened that if they were known to be reporting safety deficiencies they would almost certainly lose their jobs... This climate of fear is not conducive to the establishment of a safety culture at sea...

Admiral Lang would certainly appear to be correct in many respects – although the author would again reiterate the important point that a number of shipping companies and individual seafarers appear to have transcended that barrier and moved into the more enlightened state. There is another very important issue which links to Admiral Lang's comments, although the criticism could probably not be levelled at him or the MAIB. There is a very clear policy within the MAIB, indeed it is written into its constitution, that its purpose is not to pass judgment or apportion blame but rather to

establish causality and derive lessons to be learnt. This policy may not always be appreciated by seafarers or shipping companies and certainly in many other countries the policy of the investigators is quite different. The experience of having investigators on board is likely to be a very frightening and intimidating experience. There have been many cases reported around the world – including the UK, other parts of Europe and the USA where the Master and other members of the ship's crew have been arrested and taken ashore to be locked up in prison cells. Seafarers are, in some cases, treated in humiliating and degrading ways and denied the rights and privileges of ordinary citizens. They are treated as criminals and often used as scapegoats – particularly if there has been an incident involving a loss of life or pollution. The ships, the individuals and the companies are often fined very large amounts of money in respect of alleged violations and the individuals or the ships are detained until such time as the fines are paid.

If ISM is to work it requires more than just the seafarers and the shipping companies to move towards the development of no-blame safety cultures – the whole industry and related Administrations, legal bodies and professions must also mature and move in that direction. Society needs to also mature and move in that direction. Once that is achieved – and can be clearly seen to have been achieved - then the progress within the shipping industry will surely be accelerated. The judgment of the Honourable Mr Justice Steel in the *Torepo* case is, in the view of the author, a great stride in the right direction. Hopefully his colleagues within the judiciary, both in the UK and elsewhere, will learn important lessons from that judgment. People will still make mistakes, irrespective of the ISM Code, but provided they are trying their best to properly implement a working SMS and it was possible to demonstrate that the incident was a 'one off' then little would be achieved by punishing those who made the mistake, or their employers. In a properly functioning SMS the appropriate lessons would have been learnt from the incident and corrective action put in place to reduce further the chances of such a mistake being made again.

Some quite bizarre 'conflict' situations were reported by both seafarers as well as shore based staff. Perhaps one of the most alarming was received from a British Chief Engineer:

*My owners are not interested in 'Safety' etc. only in how cheap the ship can be run.
Have received instructions from owners to refuse permission for PSC, USCG, etc to board the vessel.
However, I report defects to authorities when crew safety, etc. is at risk as this is often the only way the owners will carry out the repairs.*

This would certainly prompt a potentially interesting, and perhaps entertaining, situation – the mind boggles! One wonders if the owners provided any suggestions as to what should be said to the USCG officer who was on his way up the gangway to tell him that he would not be allowed on board.

In case there is any doubt in anyone's mind – the author would strongly recommend that seafarers do not attempt to refuse permission for PSC, USCG to board the vessel!

There are many potential conflict situations which can arise between those working on board ship and those in the office ashore. Often these are very difficult to overcome since individual's wills and egos are invariably involved. There were a

number of examples of incidents submitted whereby the instructions from the office ashore were contradictory and conflicting and placed those on board in an impossible position. A classic example was that reported by a Lithuanian Chief Officer:

On board ships of our manager we are in between two fires: safety and quality department (SQD) and technical department (TD). SQD telling us that you must carry out work according to the manuals. TD telling that you must do some works despite manuals, because they cannot provide necessary (not gas free, lack of safety tools and equipment), owing extremely tight budget and we are working safely as possible, because we need this job. So ISM Code can't change nothing in Companies with tight budget – and most hate thing is paper work, paper work, paper work for nothing (ISM Code!)

An Indian Chief Officer explained how he felt utterly intimidated by certain members of the office staff who were acting contrary to company policy. He described the situation in the following terms:

It is very important to state that this 'no blame' culture has not permeated into the organisation. There are a few personnel in the shore staff who still intimidate on board personnel when incidents are reported – although the top management is totally committed to a 'no blame' policy. It is still a problem to implement this policy and there should be methods devised to ensure proper reporting in the Company – maybe not to department directly concerned (at least for the present when personnel may feel that they maybe victimised).

Reports were received of 'cost cutting' by the office which sent clear messages to the seafarers with regard to the company commitment to safety. An Australian Master produced a 'classic' where the safety improvements required would have cost very little money to implement. He draws the worrying conclusion that if the Company was not prepared to deal with such a small matter adequately what hope will there be for dealing with something major! He explains what happened in the following terms:

"ISM is practiced because they (the Company) have to do it. This makes it a good thing in my opinion. But if it costs money no action is taken. One of the more ridiculous examples was where the welder was getting burnt hands due to inferior quality welding gloves. The safety officer recommended quality European ones. He was told to forget it and cancel the report or his job was at risk. If the above is valid for small costs, imagine the reaction to serious costs."

One of the roles and functions of the DP should be to allow such a problem to be bypassed and the DP should have the ear of the highest levels of management. However if the DP is amongst those doing the intimidating then a serious problem does exist. It is quite possible that the very senior levels of management would be genuinely horrified if they were aware of such a situation or at least that such perceptions

existed. The sorts of problems the last Chief Officer was probably alluding to was maintenance which needed doing and which was being cut back by Engineer Superintendents who were trying to keep costs down, excessive hours being worked by staff on board which the HR department would rather not hear about, or the need to reduce speed in restricted visibility when the operations department may have very clear ideas about the importance to maintain ETA's and schedules.

Sometimes the potential conflict is where to draw the line of reality. Although it may be 'stating the obvious', it is very important that everyone realises that successful implementation of ISM involves partnerships. No matter how much the shore management of the Company may have genuine desires to see the SMS work – they will achieve nothing if they have not persuaded the Master and seafarers on board that it is something worth doing and to making a full commitment. Similarly, it is very unlikely that much will be achieved, even if the Master, officers and other seafarers are great exponents of ISM, without the support from the office ashore. The whole of the ISM anticipates and requires the 'organisation' to operate as one team. In this way a strong and healthy safety culture can be developed and the management of safety and pollution prevention will follow as a natural consequence.

This very simple principle was described by the Safety Manager of a Turkish Shipping Company:

“The success of SMS depends on the dissemination level of the safety culture on Company and on the ships.”

An important part of that partnership involves a mutual respect being established between the parties and an appreciation of each others problems and possible constraints. Again the problem, and its solution, lays in the ability to 'communicate' with each other. The frustrations which can be experienced, from a failure to develop mutual respect and to communicate with each other, is perhaps highlighted in the following report from a British Second Mate:

“The ISM Code and indeed a company's SMS will only be effective if the vessels officers and the management company strive to make it work. Often I find myself fighting with management over simple matters, because they seem to want only perfectly completed paperwork and not reality. Despite our attempts to reduce the files in our SMS, over the last 2 ½ years our system has gone from 65 files to 80, and that's only on the deck side. I no longer consider myself a deck officer but a seagoing secretary – constantly under pressure to complete paperwork.

We have just successfully completed our intermediate external audit from the MCA receiving only 3 minor non conformities – However, if they had time to dig deeper, for sure we would have conceded dozens!”

We can surely hear a plea to be listened to coming from this Filipino Master:

Also some company could have improved their ISM system if they will accept feed-back from ship.”

An ISM Consultant with a very keen eye for this vitally important aspect shared the following thoughts and reflections:

“There is a lot of concern with safety. Huge investments are done in better equipment, ships, computers, etc., but it is always the trend to give less and less to the "human element" (the seafarer): less payment, less leisure time, less vacation time, less people on board. And the "human element" knows it, feels it, and its hurt because of it. Doesn't feel very good on board and that is against safety. I believe it will be more productive investing in people more money instead of only in machines.”

It does often seem that some companies, who perhaps believe they are doing the right thing, spend considerable amounts of money on sophisticated electronic equipment and computerised systems. They fail to realise that if a part of their budget and time was spent addressing the real human element issues then they would see a much more productive return. Too often it seems that shipping companies are run by accountants who have very little, if any knowledge or understanding of life on board a ship or what sort of things might motivate seafarers to perform better. Life on board ship is a strange environment and certainly very different from that which many of the shore based staff in the office could ever imagine. A Filipino Chief Engineer describes what is almost despair with the way seafarers are treated and provides a possible solution which many would be advised to reflect upon and try and understand what this Chief Engineer is really trying to communicate:

“The ISM audits focused too much on operational safety and environmental protection. Crews tasked to perform this function should have clear state of mind and therefore a happy ship – meaning crew on high morale tends to perform better. Ship managers should look into putting some emphasis on masters carrying out this responsibility to form part of the audit. Although there are no statistics to prove this point, a happy crew hopefully is an added advantage and crew welfare is a case in point.”

Clearly he is not really suggesting that the audits should not focus on operational safety and environmental protection – for after-all that is exactly what the audits should be doing. Rather he is trying to draw attention to the fact that we are dealing with human beings and not computers or machines. If the SMS is not working as it should then there is a good possibility that there will be a ‘human’ element involved somewhere and may even be the primary cause of the problem with the system. The audit needs to be able to pick up these human element issues and find corrective actions in a human way.

At the end of the day many of the problems can be traced back to basic economics – the ship operator has a finite amount of money coming in and cannot, for any sustainable period, continue paying out more than that amount. A crucial question that needs to be asked is whether there can be any justification at all for leaving the whole responsibility and cost of implementation on the shoulders of the Shipowner? The last question could perhaps be rephrased by asking whether it would be reasonable to expect other interested parties to participate in the management of safety on board – or at least create a situation whereby the Shipowner could provide what is necessary or whether those other parties would be prepared to contribute towards the cost of developing and maintaining a system to manage safety

management. At its basic level the real question is addressed in this comment received from a New Zealand Chief Officer:

If cargo owners are not held responsible for the quality of the ships that they use, then there will never be the financial resources from freight rates sufficient to materially improve ship operations worldwide.

The full significance of what is being said here should not be missed. If it is necessary to increase the ship operators income – so that the SMS can be properly funded – by increasing freight rates and charter hire rates then we are all going to have to share in the consequences. Basically the cost of fuel for our cars, the food on our table, the clothes on our backs and most other things we need to purchase in our day-to-day existence will increase. Many of the consumable products we use have arrived from overseas by ship and even goods produced locally will have had to be transported using fuel and possibly vehicles which have arrived by sea. If the transportation costs increase to the importer or merchant then those costs will have to be passed on down the line to the final consumer.

When a major maritime accident occurs on our shore line, particularly if there is loss of life or a major pollution – or if a seagull is injured or a pretty village is perceived to be threatened – then the newspapers and television news reports quickly whip up a public outcry against these ‘substandard ship operators sailing their rust-buckets around and flying these terrible flags of convenience’. Maybe they have a point but if they were asked to agree to a 10p per litre increase in the cost of their petrol, or an extra 15p on their pack of Corn Flakes – how many would happily say Yes? How many would even understand the relevance of the question?

All the Oil Majors and many other substantial chartering organisations make very high demands with regard to safety and the management of safety on board the ships they take on charter. This puts pressure on the ship operators to ensure those standards are met in order to obtain the business – this in turn assists those on board in seeing those standards realised. The situation is described by a British Master in the following terms:

“The ISM Code has failed to address the participation of charterers, terminal operators, port authorities etc. Without their involvement at times unnecessary commercial pressure is put on the Master.

A Second Engineer goes even further to explain the stark reality:

Generally whilst the correct noises are made, it comes to a grinding halt as soon as the cost of improvements is realised, unless charterers or Classification Society demands it, then it is a case of how high do you want us to jump!!

What is not addressed here is the fact that the Charterers will pay the minimum they can get away with in Freight or Charter Hire. Of course they are working in a hard commercial environment in the same way as everyone else. The shipping industry is of course subject to the basic economic laws of ‘supply and demand’. The reality is that if one ship operator is not prepared to accept the ‘going rate’ for freight or charter hire then there is probably another ship operator around the corner who will be prepared to accept what is offered. In this way the shipping industry itself is contributing towards the depressed market conditions. There are basically too many

ships, many of them very old, available for too few cargoes and ship operators seem too willing to cut each others throats in the competitive market. In this potentially dangerous commercial market the temptation to cut corners can be considerable. The conflicts, whether perceived or real, can also be the cause of moral dilemmas to individuals such as this Indian Chief Engineer:

“In the face of commercial pressures, fast turn arounds, tight budget controls, continuous breakdown of machinery, old vessels, strict and sometimes conflicting legislation, individual interpretations of codes, personal whims and fancies of auditors, implementation of ISM Code on board the vessel becomes a sort of ‘nuisance’ inspite of knowing that these codes are for the betterment of industry and for the safety and well being of sailors.”

One of the keys to the successful implementation of any management system as well as overcoming potential conflict situations is good communications. This involves communication at all levels – internally within the ship as well as between the ship and the office ashore. Of course any communication must be a two way process. Once that two-way communication has been established then it should be possible to perceive a noticeable improvement in the general attitude of individuals towards the successful implementation of the SMS. One of the major causes of problems and a failure of the entire system is poor communication. The enthusiasm and positive attitude from individuals such as the following Bulk Carrier Chief Officer will almost guarantee the success of the system:

“The significant factor is the inclusion of all members of the ship’s complement into the safety culture. Every member is kept informed of all developments both positive and negative, and as a result, everyone is aware that their actions and opinions matter to the overall result.”

Every one is on the same ‘song sheet’ as it were – everyone on the same team – all pulling together in the same direction. By working on, and developing, communications in this way the Safety Management System should grow from strength to strength. Communication helps to ensure everyone’s participation in the management of the safety management system. An Australian Second Mate described what was happening on board his ship:

“ISM is working well. Everyone has a voice via safety committees and ship management meetings. People on board and ashore are more aware of their responsibilities to themselves and others.”

Clearly on board that ship people were working together and participating in the SMS. A report received from a Chief Engineer, who was involved at a relatively early stage of implementation, suggests that the staff in his company had appreciated the importance of good communications and had built this concept into their initial verification stage:

“At present we have a SMS on board – although we are still to be certificated as ISM compliant. The SMS has been in place since early 2000 with one internal audit in August 2000. The SMS appears to be working well with management and sea going staff communicating effectively. Since the internal audit we have not identified any non-conformities.”

Clearly no one should underestimate the importance of good communications and should ensure that maximum effort is put into developing those good communications if conflicts are to be overcome. It is also important to remember to ‘include’ as many people as possible in the communications – each person will have their own contributions to make. Let us listen to a Filipino sailor:

Meetings should be conducted more often with consultation from lower ranks without fail so that they can express their feelings / true feelings without fear or harassment. This is due to the fact that it is with our Filipino culture not to speak out. I believe in true form of ISM is a very good for Filipino seaman. Only it will take time before we can eliminate the feelings of fear. In overall look ISM lower the incident of death and near misses.

8.3 Standardisation and policing the systems

Many of the reports received as part of the survey drew attention to very significant differences in standards – not only between ship operating companies – but also between different flag State Administrations, port State control authorities, Classification Societies and indeed between different individuals working within the same organisation. Some reports indicated corruption and coercion – although the indications are that such activity is not rife. Many more reports pointed towards inexperienced, unskilled and unqualified individuals who were involved in auditing or inspecting the SMS.

The frustrations that result from this were expressed by an Indian Chief Engineer who was clearly speaking from the heart:

*“The initial good intentions of the ISM Code did not produce the expected results for the following reasons:
Various regulatory authorities / interested parties, involved with the shipping industry (e.g. classification Society / Port State Control of various countries / different Oil Majors / USCG) miserably failed in formulating a uniform international standard which should be feasible for the Shipowner to comply with minimum fuss and expenses. In practice none of the above mentioned ‘parties’ have anything in common with each other although all of them expect compliance of all their million regulations from the shipowner or operator if their ships has to continue trading. Because of innumerable inspections in all almost every port by these above authorities, sometimes the owners / operators as well as the people manning the ships get a distinct feeling that by virtue of operating or working a vessel a ‘major crime’ has been committed and penance is required therefore, which is really a very sad state of affairs, as the whole world and*

the people in it must realise that without seatriade the civilization can only proceed towards annihilation. I have not seen any attempt being made anywhere by the above mentioned 'regulatory authorities' to inform the people at large regarding the 'seatriade' and people working in ships and making the trade possible and the companies, owning / managing these ships.

A Classification society surveyor and auditor drew attention to a range of 'standards' of application which he comes across and suggests that the core problem is different parts of the world seem to be prepared to tolerate very different standards. He described his own experience in these terms:

"As an ISM Client Co-ordinator, dealing with active vessels auditing and reviewing cases for this region perhaps the following comments may be of use.

It is difficult to generalise all companies together, we see / audit companies of the highest standards, that are seen as guiding lights in the implementation of ISM. Also we see on a regular basis in this area companies that look upon ISM as just another piece of paper to appease PSC, and buy such off the shelf for as little as possible. This type of owner will always strive to cut costs on the back of safety. On some vessels, on which certification was refused examples of conditions harking back to the days of when malnutrition was more common cause of death than drowning at sea!

Unfortunately the situation, although becoming more rare has not improved for some seafarers at all with the introduction of ISM. However, it is not the Code itself, or other certification but the enforcing of world wide standards across different cultures that is the problem."

The IMO Guidelines (A.913 and MSC Circ 890 / MEPC Circ 354) attempt to introduce a level of standardisation, guidelines within the MOU's and the Classification Societies also attempt the same exercise. These do appear to be having an effect and the situation does seem to be generally improving. However, there would still seem to be a long way to go. Part of the problem might be that there is no one organisation that is monitoring or policing standardisation.

It is the view of the author that an Inquiry should be undertaken, at an international level, to establish whether a more structured approach is needed to encourage standardisation in the verification, certification and compliance procedures. This may involve, for example, a requirement that all inspectors / auditors – whether they be acting directly for a Government or Classification Society – must undergo a formal course of academic study and practical training in the ISM Code to be followed by a formal examination. The syllabus, courses and the examination to be conducted by organisations independent of the employers of the candidates. The individual would become certificated / licensed to conduct ISM verification audits and to issue DOC's and SMC's. The most obvious body would be, perhaps, the IMO itself.

It may also be appropriate to devise a system to license flag State Administrations – or at least Recognised Organisations to issue internationally recognised DOC's and SMC's with the possibility of having such a license cancelled, revoked or otherwise suspended if it transpired that such an organisation had authorised the issue of certificates for systems which did not meet minimum standards.

In addition, the Inquiry could consider the possibility of setting up a team of inspectors who could attend a shipping company's office or on board a ship – immediately following a verification or interim verification audit to 'spot check' that the verification had been done to an acceptable level and the certificates had been properly issued. If discrepancies were found then various levels of penalties could be imposed with the ultimate sanction of cancelling or withdrawing the individual licence of the inspector and possibly the operating / issuing licence of the organisation involved. Again an obvious body to undertake such a task would perhaps be the IMO.

8.4 Managing safety in other high risk industries

This has been a very wide ranging survey but, inevitably, it is incomplete. There are many additional issues which require exploring. It had been the author's intention to conduct a detailed investigation into how safety is managed in other high-risk industries. Having looked at that aspect he came to realise quite quickly that such an exercise would require an entire research project in its own right. Interesting dialogue was entered into with management and staff in a number of other industries and professions – sometimes it was clear that those other industries and professions were experiencing very similar problems to those being encountered by commercial shipping with the implementation of the ISM Code. Others had shown that they had, apparently, overcome those problems.

A very interesting debate was entered into with an individual who was actively involved in trying to encourage the reporting of accidents, hazardous occurrences and near misses within the National Health Service of the UK. Clearly this is literally a 'life and death' occupation and, for that reason, it is vitally important that any lessons that can be learnt are learnt. It had been very difficult to persuade medical doctors and nurses to report their mistakes, or near mistakes, not only because of any personal pride but because they were afraid of being sued, prosecuted or possibly struck off the practitioners register. However some success was achieved and a number of Health Authorities did persuade their staff to cooperate and report. In the spirit of the 'no-blame' culture the results were published and immediately the front pages of the newspapers were covered with headlines saying that the Health Service was in a state of disaster with Doctors and Nurses admitting to thousands of mistakes. All the good work which had been done, all the potential lessons which could have been learnt, all the lives which could have been saved as a consequence were instantly thrown out of the window by an utterly ignorant and irresponsible press.

Whilst contact was made with many individuals working within the offshore oil industry – one particular encounter proved to be very interesting. A relatively young Master had decided to leave the sea and move into the offshore oil industry – the dialogue with the author spanned this career transition period. At sea the individual was Master with a 'blue chip' liner operator which is a household name. He was quite typical of many Masters from a similar background with whom the author had had the privilege of talking – he believed that on board his ship they managed safety very well, they worked in a 'no-blame – safety' culture and really didn't need the ISM Code. When he started his familiarisation and training programme, ahead of actually going offshore, he was amazed to find that there was in fact an enormous divide between the whole approach to safety in the offshore industry compared with commercial shipping – his expression was something along the lines that 'shipping was still living in the dark ages'. Very soon after commencing his training the induction group was visited by the Vice-President of the Company who had flown in from the States. It appears that the visit had a three-fold purpose:

1. to welcome the newcomers to the company

2. to emphasis that safety takes priority over everything else
3. to make it very clear that anyone found not complying with the safety policy would be instantly dismissed.

Safety management systems, or similar concepts, have existed in the airline, offshore oil, chemical, nuclear and many other industries and professions for many years. They experienced many of the problems which commercial shipping has been experiencing with the implementation of the ISM Code and managed to find ways of overcoming them. Other problems are still causing them concern. However, it must surely make sense for the commercial shipping industry to examine closely what other industries have done, or are doing, with regard to managing safety and understand how they are doing it. There must be an enormous number of lessons to be learnt from those other industries. It seems so obvious yet quite remarkable that little seems to have been done to look outside of our world of shipping. There seems to be some sort of misconception within the shipping industry that this is a new wheel that needs inventing independent of the rest of the world.

A classic example of this apparent ‘isolationist’ attitude is perhaps highlighted in the UK by the fact that the Health and Safety Executive (HSE) are commissioned to monitor safety and investigate accidents in just about every high risk industry except shipping where it is left to another Government department – the Maritime and Coastguard Agency (MCA). The HSE must have an enormous amount of information and experience that could be drawn upon by the shipping industry in its efforts to manage safety?

A significant number of respondents suggested that the shore management were simply not facing up to their responsibilities which was having a very negative effect on the ability to manage safety on board ship. Of course we must constantly bear in mind that we cannot generalise too much about ISM implementation and it would be unfair and incorrect to suggest that this problem is widespread. However, it does appear to be sufficiently common to have prompted many people from different sectors of the industry and from different parts of the world to report similar problems quite independently.

One German Chief Engineer reported deep-seated problems going back a number of years:

“No support (minimal) from head office staff. Main interest of some is about profit, and we will be forced / ordered to take shortcuts (dangerous measurements i.e. machinery, winches etc.). Ships are run on a shoe-string budget, awaiting / never receiving parts, spares etc.

Superintendents and safety manager ordering us to cover up and lie about many items. But then of course what’s new, in my 30 years at sea with different companies it’s mostly the same. To implement any Code or system, I feel that all office / land based staff should attend an intensive course about it, and their attitude about personnel working on ships should change before any code can work.”

It is certainly possible that the German Chief has touched upon a very important point – that some of the people involved in the management and operation of ships these days do not have any real understanding of what ISM implementation actually means. It is easy to imagine that someone who has not understood the concept of a safety management system could very easily be led into the mistaken belief that once the

Procedures Manuals have been ‘obtained’ and the DOC and SMC have been awarded and nicely framed and displayed – then everyone can relax and get back to making money. Clearly such an attitude demonstrates a fundamental misunderstanding of the ISM Code and everything it is trying to achieve. Such an attitude was described by an ISM Consultant who was speaking from first hand experience:

“The Companies in general do far to little to implement the system in full. Most companies are satisfied when they have the SMS / DOC in order and do not want the system to be active on board. People ashore do not pay attention to the reports coming from the ships if it involves costs.

Look at for instance chemical tankers in main ports such as Rotterdam. The officers and crew are working around the clock. This is well known to the Company, but if the crew complain they get no answer or “...if they don’t like the Company they could find other work...”

It will take many, many years yet before we will get a good safety system implemented in full.”

8.5 Overcoming misunderstandings

From a review of many of the questionnaires and the detailed comments received, it became apparent that there were some quite serious misunderstandings and misconceived ideas about the ISM Code held by a significant number of people – particularly seafarers. Often these seafarers were in senior positions on board and often from the so-called traditional maritime nations. The following comment from a British Chief Engineer was quite typical:

Management have effectively thrown responsibility for safety back to the vessel. They have taken the ISM Code and produced their QA system and told us to make it work. Classification societies have helped them as it has created more work for them, hence more income. With the vast amount of extra paperwork a paper trail can now be followed to point the finger of blame at someone, at the bottom of the pile, who was supposed to have done a job.

A British passenger ship Master had arrived at a very similar conclusion:

I feel that the true motivation for the adoption of the ISM code is that companies and statutory bodies are intent on totally absolving themselves in any blame after an incident. By quantifying everything on paper, they can conveniently blame ship staff at all times.

There can be no doubt at all that the ‘responsibility for safety’ under the ISM Code is very clearly with the Company with the big ‘C’ and that responsibility cannot be delegated to the ship or anywhere else. Of course the ship, and those on board are partners in the implementation process and to that extent share in the responsibility. If the Companies for which this Chief Engineer and Master work actually share their views then they are likely to have a big shock coming to them if they do have any accidents or claims. If there are vast amounts of extra paper then that would tend to

suggest a poorly constructed SMS – which is back to the Company rather than the ISM Code.

One of the great misunderstandings, which is very widely held, is that ISM is responsible for creating vast amounts of paper. There is nothing in the ISM Code which calls for vast amounts of paperwork to be created. If there are vast amounts of paperwork then that is down to the way in which the particular SMS has been constructed.

A cause of concern was that these particular senior officers were not alone in holding such views. Indeed, misconceived views were not just restricted to seafarers. A rather alarming statement was received from a marine surveyor :

Checklists are futile. A checklist is only as good as the man and pencil ticking little boxes. If the man is competent why does he need a checklist? It would appear that the ISM Code is assisting operators employ cheap low skilled crews with the benefit that they can get adequate on board training with checklists. Senior personnel have a difficult job onboard running ships with these inexperienced 'check list crews' who invariably have not received proper shore based training.

A British Master was making the same point:

*If seafarers were properly trained to do their respective jobs, then checklists would not be needed.
i.e. before you drive a car do you complete a checklist?*

Perhaps the surveyor and the Master should pop their heads into the cockpit of the next aeroplane they join and explain their theories to the pilot, co-pilot and flight engineer who will, most probably, be filling in their checklists. Or maybe they would care to visit a Nuclear Power Plant and suggest to the duty engineer that if he was a properly trained nuclear scientist he wouldn't need that checklist he happens to be carrying around.

Within a properly functioning SMS the use of checklists will reduce considerably the risk of human errors being made – i.e. forgetting to do something. Certainly checklists should never be used as some sort of substitute for employing properly trained and skilled crews – but they do have a very important memory jogging function to perform.

Following on a similar point a Second Engineer shared the following thoughts:

*Precedence of qualification needs addressing, at the moment in my company at least, ISM related subjects appear to be superior to professional qualifications which I personally find highly insulting. ISM appears to be a substitute for proper effective training i.e. cheaper.
ISM should make it possible to pluck someone off a street corner and let them operate a ship from a tick list. My company even has a T.R.A. for entering and leaving ports and also the likes of when to abandon ship, God forbid we are ever at a point where Masters need to use a check list to issue abandon ship orders.*

As far as the author understands there is nothing contained within the ISM Code which could lead to such conclusions being reached – quite the opposite. The intelligent use of a check list for an abandon ship situation would certainly not be a bad idea – it would avoid important things being forgotten during a most stressful situation. In fact Masters have had checklists for such situations long before the introduction of ISM – it is just that these were mental check-lists and thus may not have been written down. It is suggested that there is no attack upon the professionalism of an individual because such check-lists are written down – rather they may very well save peoples lives! In all other high-risk industries such checklists are common place and part of doing the job – with seafaring it appears that it may take a little while to educate people into a similar safety culture.

A related issue is criticism of a ‘Permit to Work’ system. A most worrying report was submitted by another British Master:

The Code has increased the number of accidents and incidents because it encourages reporting of such. It has introduced a permit system that many, if not most, seafarers find unnecessary and demeaning their professionalism. Consequently permits are filled out and their guidelines ignored. This is because there are too many permits for activities that were once just routine jobs. (climbing a mast, working overside in port). The sheer volume of paperwork, particularly on busy offshore vessels, means short-cuts are taken and if you can get away without filling in the correct forms then you will.

There are many issues which arise here which are cause for considerable concern. The first sentence doesn’t seem to make any logical sense at all? The fact that in the past accidents and incidents were not reported does not mean that they didn’t happen – it merely suggest that they were not considered important.

With regard to the Permit to Work point - the ISM Code does not, of itself, require permit systems to be in place for jobs such as ‘climbing masts’ or ‘working overside’ - these requirements are set out in the *Code of Safe Working Practices for Merchant Seamen* which pre-dates the ISM Code by many years. If, as seems to be suggested by the Master, such procedures were not being followed before or since ISM implementation then his ship would appear to have been operated in breach of the Code of Safe Working Practice – which is a very serious offence (Merchant Shipping (Code of Safe Working Practices for Merchant Seamen) Regulations 1998 (SI 1998 / 1838)). He suggests that to comply with the ISM Code, and by implication with the Code of Safe Working Practices is ‘demeaning to the seafarers professionalism’ – such a statement is incomprehensible to the author.

There are also some who appear to have firmly held preconceived ideas about ISM but one would have to question to what extent they have actually understood what ISM was all about. The following attack on ISM was received from a British Master:

ISM makes no difference to a well run vessel because it is well run. ISM makes little difference to a poorly run vessel, if the normal practice of good seamanship can be ignored so can ISM. ISM is a huge raft of paperwork that has been dumped onto ships staff, the main object of which is for management to clear their yardarms.

*More enforcement of regulations is required, not more regulations.
Evoli Sun, Erika and Norwegian Dream were all ISM compliant.*

As was explained above there is certainly no question of management ‘clearing their yardarm’ by dumping paperwork on board the vessel – the Eurasian Dream judgement is well worth reading if anyone should be in any doubt. A properly constructed SMS will provide a structure on which management of safety can be constructed. This is not an alternative to ‘the normal practice of good seamanship’ but rather an opportunity to ensure that good seamanship is applied in practice and in a consistent way.

Whether or not any of the vessels the Master mentions in his last sentence were or were not ISM compliant would be a matter of fact. Presumably, what he means is that those vessels held SMC’s and the operating companies held DOC’s. Whilst every effort should be made to raise the standards and standardisation of the issuance of SMC’s and DOC’s – they can only represent a statement that at the time of initial, or interim verification, an authorised representative of the particular Flag State Administration (or R/O) was satisfied that the Company and the ship / crew did comply at that time. Adequate policing of the system may very well need improving as well as standardising compliance criteria and these are discussed in the section above.

One British Master quite proudly declared that onboard the ships in the company he works for they get on with managing safety in the way they always did and totally ignore the ‘formal’ SMS. He described the situation as follows:

*Initially the system was badly implemented and not fully explained to ship’s personnel. A load of manuals were thrown on board and we were told to get on with it.
The ships are well run anyway so the only noticeable difference was an increased paperwork load.
After the initial flurry of activity the general feeling is that the running of the ship has got back to normal while the manuals gather dust on the shelves.*

This would suggest that a very serious and major non-compliance with the ISM Code, Section IX of the SOLAS Convention and the relevant domestic legislation of the Flag State (in the UK that would be the Merchant Shipping Act SI 1998 No 1561) is knowingly and deliberately taking place. In the UK that would expose the Master, the Shipowner, the DP and possibly others to fines up to £5000 and a prison sentence of 2 years – possibly longer. If an incident occurred, particularly if loss of life was involved, the charges could involve manslaughter and / or very high levels of fines and / or very long prison sentences. A pollution incident would also result in very high levels of fines and possible prison sentences. If it transpired that there had been a deliberate policy to ignore the official SMS then it is very unlikely that any defence would be possible – this would be the case whether the incident was in the civil or the criminal courts. If there is a problem with the documented procedures of the SMS then that needs addressing immediately and appropriate corrective action put in place. An ostrich approach to the problem is likely to result in very serious consequences including being in breach of all insurance cover.

Yet another British Master submitted a whole menu of critical comments about the ISM Code which the author at least found difficult to understand:

- “1) ISM – another way still to inundate seafarers with largely irrelevant paperwork to the detriment of time spent understanding the ‘job’ properly.
2) Creating more employment for people with little understanding or qualification within the industry (perhaps personally felt – our ISM manager used to be a car salesman!)
3) Creates confusion as to which takes precedence state / international law v. ISM. Contrary to belief this has still to be tested – by someone else hopefully!
4) ISM does little to alleviate original / base problem – too many substandard ships run by inexperienced ‘idiots’ around UK coast and Europe – accidents waiting to happen – Governments impotent / naïve – shipowners lobby too clever.”*
British Master

It maybe that this particular Master has also had a bad experience of a particular Safety Management System introduced by his ship operating company but it really is very difficult to understand how such conclusions could possibly be reached. For example, what can be the basis for his argument in numbered paragraph 1? What irrelevant paperwork does the ISM Code require? As far as creating some sort of impediment to the job is concerned - Section 6 of the Code raises this as an extremely important issue and makes it very clear that the Company has the responsibility to make sure that everyone is properly trained and familiarised with the jobs they are to undertake on board.

It is very difficult to try and make any sense of numbered paragraph 3. How can ISM stand in some way in contradistinction to the law of the Flag State or the law of the Port State? The ISM Code does not exist as some separate set of divine Rules. The ISM Code was incorporated into a new Chapter IX of the SOLAS Convention - which almost all maritime nations have ratified and have incorporated into their domestic legislation. The Flag State will determine whether the particular ship complies with their interpretation of the Code or not and will issue a SMC after verification. Only the Flag State can revoke or cancel the SMC. Each Port State will have its own interpretation of how the ISM Code should be implemented and the PSCO decides that they want a closer look at the SMS then they will examine the system according to their interpretation. If, on their interpretation, they find deficiencies in the system then they may detain the vessel. The Flag State may very well be called in at that time. At this time there is still no uniformity in the interpretation of the Code between Flag States, Port States or Classification Societies acting as Recognised Organisations on behalf of Flag State. There is certainly no question of the 'ISM Code' somehow conflicting with International Law.

It is interesting to compare and contrast the views of other experienced seafarers. It can then be seen that many of the misunderstandings about ISM could probably be attributed to bad experiences of particular SMS's and poor quality shipping companies. The following British Master had clearly enjoyed the benefit of experiencing a properly structured and implemented SMS in a company that cared and understood what ISM was trying to achieve:

The ISM Code and SMS is the best thing that has happened in my 33 years at sea. It has taken all the guesswork away from the Master. The SMS is also there for everyone onboard to read understand and

use. It covers both the Masters and the company in their responsibilities. I know the company I work for use the SMS like a Bible. The company encourages the review of SBMS and suggest any changes that could improve its operations

Again the point is that it is not the ISM Code which is the problem but rather the way in which individual safety management systems have been constructed and implemented.

One consequence of an inadequately implemented SMS is that the whole thing is perceived to be something to do with Master and senior officers – and perhaps the people ashore – but nothing to do with anyone else on board. The following comment from a Third Engineer clearly illustrates this misconception:

“Has little or no effect on third engineers, but appears to be a complicated paper chase”

Clearly it is more than just a reflection of a very poorly implanted SMS which would leave a Third Engineer with such a perception – it perhaps is a reflection of a failure by our industry, and our training establishments, to explain and describe the basic concepts of the ISM Code to our seafarers.

Interestingly, another Third Engineer provides a very different perception and a refreshingly illuminated insight:

“Before gaining my C.o.C (Certificate of Competency) I worked as donkeyman on my vessel. All the ISM Code meant to me then was a never ending stream of inspections and audits. It’s fair to say that then the Code meant nothing more than a ‘buggerance’ factor – as it still does to the ratings onboard. Now I have moved on and subsequently found out more about it and its implications, I can safely say that I am fully behind it and that with time we will see the benefits of its setting up.”

There is no reason, and there should be no excuse, for intelligent people on board ship not to understand what is the basic concept and philosophy behind the ISM Code. They should also understand their own role in the working of the SMS and a general idea of how the system is structured on board their ship. Indeed they should feel a part of the system and have a positive input via safety meetings and the like.

The author tried to establish whether there might be some common source that was responsible for generating such misconceived ideas. He not only failed to find any such source – what he did find was of even greater concern. Apart from the ISM Code itself and the other related IMO resolutions and formal documents, many of which are quite technical and written in a legalistic style, the ICS / ISF Commentary – which is a good reference source for a DP, for example, and the authors own ‘Legal and Insurance implications’ book – which anticipates a certain amount of prior knowledge – there did not appear to be any publication generally available which would provide a seafarer with an introduction in to the basic concept and philosophy of the ISM Code. This really was quite remarkable bearing in mind that the Code would have a direct effect on the way in which almost every ship and every seafarer in the world would work. It became apparent that individual companies had produced their own guidance, in house, which were made available to their own staff. However, if a

seafarer was not fortunate enough to work for such a company they were left to their own devices.

In an attempt at remedying that immediate problem the author broke off from his main research program in the early part of 2002 to compile 'A Seafarers Guide to ISM'. In an attempt to speed up the writing and production process the author teamed up with Peter Kidman of INTERCARGO and published the book through the North of England P&I Association (see Anderson and Kidman)

8.6 The potential consequences of not making ISM work

Whatever individual perceptions, views or prejudices might have been held regarding the ISM Code, the fact is that the Code is now in place and mandatory for just about every sea going commercial vessel in the world. There are some who still seem to have a desire to condemn it to the depths – the author would suggest that we need to be very careful as to how we move forward from this point. There is a very real and very great danger that if the industry does not make the ISM Code work then the alternative will be infinitely worse.

At the moment, whilst the Code itself is mandatory, each Company is given the freedom to develop its own Safety Management System in its own way. The Code may state, for example, that '...the Company should establish procedures to identify, describe and respond to potential emergency shipboard situations...' (ISM Code Sec. 8.1) The Code does not attempt to provide any sort of definitive list of what those '...potential emergency situations...' might be, nor does it describe how any particular emergency situation might be dealt with. Each Company, and each ship, will know best what types of emergencies might arise on board their ships, what personnel and equipment they will have available and the way in which relevant training has been provided. The types of emergencies which might arise on board an inter Island ferry on the West Coast of Scotland with a mixture of passengers, vehicles and farm animals on board, and the way they are dealt with, will be quite different from the types of emergencies which might arise on board a 40,000 cubic metre LPG tanker.

Clearly we cannot realistically expect that the ISM Code will provide some sort of 'quick fix' across the industry. An interesting and relevant observation was received from a very experienced external ISM auditor:

I am an ISM external auditor with 250+ audits. Much of the shipping industry expected ISM to be a "quick fix" to substandard shipping - it is not a quick fix, and this expectation runs contrary to the ISM philosophy. In my experience, I have seen a big improvement in the audit results of vessel after having the SMS in place for some time; ie. Intermediate audits reflect a much better, practical SMS than the initial audits. Based on this and other factors, I believe that the ISM can work on a long-term basis (5-10 years), but we must focus on that and not on the short-term problems. In the end, port state control will contribute more than any other group towards the success of the code, as they appear without notice to see the actual state onboard.

His observation concerning the important potential role of the port State control authorities is very interesting. It is to be hoped however that certain flag State

Administrations will face up to their own responsibilities with regards to policing the systems.

The author would tend to agree with an ISM Consultant who made the following prophesy:

The problem is not with the Code but rather with the policing of its implementation. IACS has proved largely ineffective with its members and Port State Control needs to be encouraged more. What are seafarers to believe when even the Hours of Work is not enforced? ISM must not be allowed to fail through lack of commitment, I don't believe we will have a another chance at putting the industry in order."

If the industry does not get itself into a position whereby it can demonstrate that it can manage safety with this non-prescriptive Code then Governments are quite likely to start imposing prescriptive Rules and Regulations telling ship operators how they will manage safety. It may only take one more major incident involving serious loss of life or pollution in the US or Northern Europe for the politicians, prompted on by media hysteria and public hype, to see legislation imposed.

Different people made this same point in different ways but perhaps as poignant a message as could be made was submitted by an Indian Second Engineer who shared the following thought:

The impact of the ISM code is being felt across the board in Shipping today - what needs to be conveyed to seafarers is the REASON behind the ISM code . It is meant for us - the seafarers , we are the ones to be benefited the most - therefore we should embrace it without reservations . A job lost can be regained (some other company etc.) A life lost cannot.

Hopefully more and more employers will understand the wisdom of this Second Engineer and help create an environment where the seafarers work safely – because in that way the ships will become safer and, as a direct consequence, will make them more efficient. More efficient ships will make more profits!

One such employer is the British MD of a ship management company who said:

*I believe that the ISM code is still in its formative years. For heavens sake let us not get rid of it or give it up now. This is a long term project.
Now let the powers that be get tough with those shipowners who do not pay any more than lip service to the idea.*

Throughout this report we have laboured the importance of leadership from the top, communication, the development of no-blame safety cultures and many other related things that are needed if ISM is to work. Perhaps we can learn one of the greatest lessons of all though from a report received from an Able Seaman working on board a tanker. He described his introduction to the world of the International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code) in the following terms:

The last vessel I was on had a strong environment of safety that began at the top of the corporate management. The 2nd mate introduced me to the vessel and orientated me to the A.B. work. I had more knowledge at the beginning than ever before.

That AB had surely achieved ISM enlightenment! It is achievable.

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